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St. Louis Metro Area Rail Gateway Enterprise

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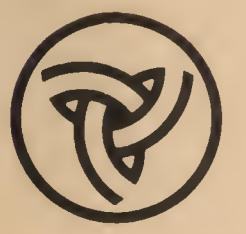
Technical Supplement
SOCIOECONOMIC IMPACT ANALYSIS



U.S. Department of Transportation

Illinois Department of Transportation

TECHNICAL SUPPLEMENT

SOCIOECONOMIC IMPACT ANALYSIS

ST. LOUIS METRO AREA RAIL
GATEWAY ENTERPRISE

Prepared for

Illinois Department of Transportation
St. Louis MARGE
325 Missouri Avenue
East St. Louis, Illinois

Prepared by

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St. Louis, Missouri

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EXECUTIVE SUMMARY

The purpose of the Socioeconomic Technical Supplement is to provide an inventory of social and economic conditions in the area to be affected by the St. Louis Metro Area Rail Gateway Enterprise (MARGE). Information has been compiled on a number of topics for a number of communities. Since the main focus of project activities will be in the Metro East area of Illinois, this report places a greater emphasis on the east side. It does, however, note the ways in which portions of the City of St. Louis will be affected.

A general economic profile of the St. Louis Standard Metropolitan Statistical Area (SMSA) is presented first to serve as a backdrop for descriptions of specific socioeconomic effects of the MARGE project. As the discussion becomes more detailed, it will focus on smaller units, defined by political boundaries, mostly on the east side of the river. The topics discussed include Displacements, Revenue Impacts, Land Use, Tranportation, Recreation, Community Values, Public Services and Public Safety, Construction Impacts, Energy Use and Employment Impacts.

In general, the effect of the MARGE project on the socioeconomic environment of the project area will be positive. Aside from the displacements which the project would cause, improvements could be expected in every category. The transportation system would benefit from faster transit times through the rail terminal and from easing of local traffic patterns. The restructured facilities would require less energy to operate and maintain than the existing ones and the grade separations would reduce energy use by idling vehicles. Although substantial amounts of land would be required for the yard restructuring, the clearance of other areas now under railroad control would provide extensive opportunities for redevelopment. These opportunities have implications for a number of the other socioeconomic impact areas. Benefits could be seen in the availability of more land for recreational uses, and in the likelihood of increased employment resulting from redevelopment.

Community attitudes toward the project are positive. The prospects it holds for enhancing employment are a consideration for all area residents. In Centreville, the location of most of the displacements, the project is viewed with some skepticism, but is recognized as a chance to improve the community. Relocations necessitated by the project can be made acceptable to residents by including them in the planning process. The improvements to be realized from project implementation, in both public safety and access to public services, provide an added inducement to residents. There would necessarily be some adverse impacts on the local environment during the construction phase of the project, but these would be minimized by using a staging process. Street closings would be announced in advance and limited in duration.

With the exception of the displacements, it is difficult to differentiate among the alternatives with respect to the socioeconomic factors examined in this report. The general, long-term effect of the project on the socioeconomic environment of the Metro-East will be to increase opportunities for employment, and recreation, and to ease access and reduce delay for people traveling within the area.

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PROJECT DESCRIPTION

Background

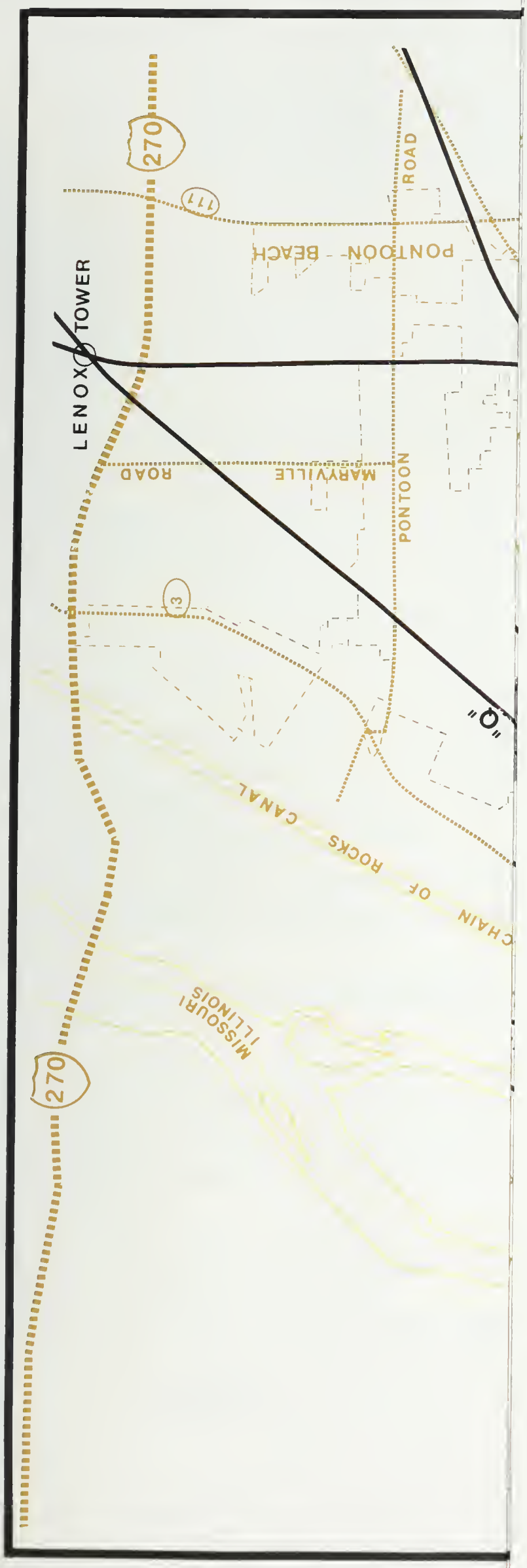
The St. Louis railroad complex, alternately called a "gateway" or a "terminal", is of major importance to the national railroad network, and its vitality is critical to the industrial and economic health of the region. Geographically, it lies near the nation's center. Situated on the banks of the Mississippi, the Gateway takes in portions of the States of Missouri and Illinois. On the west side, the majority of the rail facilities lie near the river. On the east side, however, the network extends eastward some five miles to include the Alton & Southern (A&S) Corridor east of Washington Park. The major Illinois communities within the project area are East St. Louis, Granite City, Madison, Venice, Brooklyn, Cahokia, Centreville, Alorton, Dupo, Washington Park and Fairmont City. The southern boundary is the Bixby Rail Junction south of Dupo, and the northern boundary is Lennox Rail Tower in Mitchell. Exhibit A shows the St. Louis Gateway area.

The St. Louis Gateway is the second largest rail traffic routing center in the nation. The network includes track or facilities belonging to 14 major (Class I) railroad companies, and 3 Class II (switching) carriers. There are approximately 82 miles of mainline corridors in the gateway area. The sorting of cuts, or groups of cars, for delivery to individual railroads is mainly accomplished in two large common classification yards, Madison Yard on the north and Gateway Yard on the south. Specific classifications for distant points in the country are performed in a series of "home" yards where individual railroads also handle piggyback, or trailer traffic. Gateway Yard is operated by the Alton and Southern Railroad, while the Terminal Railroad Association (TRRA), a corporation composed of eleven railroads operating in the complex, manages the functions of Madison Yard. Individual roads are charged by either of these switching carriers for the rail cars which go through the classification process in their facilities.

EXHIBIT A

STUDY AREA

VICINITY MAP



LEGEND

- ROUTE 3 RELOCATION AREA
- RAILROADS
- INTERSTATES
- PROPOSED RAILROAD YARD
- CITY STREETS
- EXISTING RAILROAD YARD

6000 3000 0 5700

SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP/ENVIRODYNE/KNIGHT

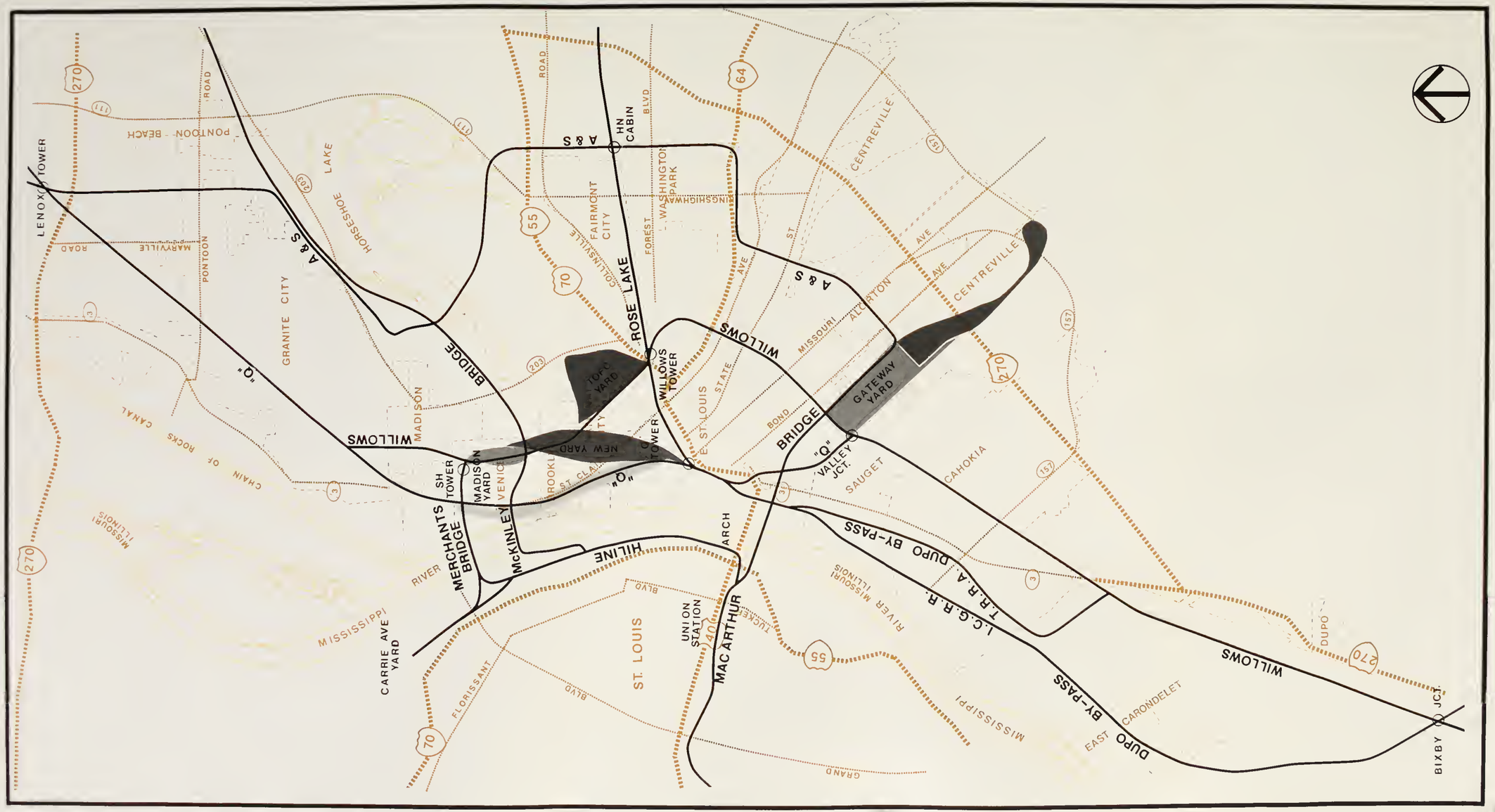


EXHIBIT A

STUDY AREA

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LEGEND

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SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP/ENVIRODYNE/KNIGHT

Railroad freight terminals, such as the one in St. Louis, are typically bottlenecks in the operation of rail systems. Increased rail traffic and age have reduced the efficiency of terminal operations and shipments often encounter excessive delays moving through congested switching and classification facilities. Facilities built early in the development of the rail system have become obsolete, but have continued to occupy sizeable amounts of land, constraining land use patterns and forming barriers to social and commercial activity.

In the St. Louis Gateway the situation is worsened by the continued presence of yards and tracks originally built near the river to hold cars awaiting the ferry crossing. These facilities became unnecessary as bridges were built and were used less and less until, in some cases, they were virtually abandoned. As in other urban rail terminals, this has served as a blighting influence on the area's economic development. Further, underutilized railroad properties do not yield tax revenues proportional to the amount of land they cover. The complicated network of yards and track has also produced a contorted street system where delays to vehicular traffic are frequent and lengthy. This combination of problems attributable to railroad influences has lead the Federal Railroad Administration (FRA), in concert with state and local officials, to seek ways to improve rail operations and to create valuable urban development opportunities by freeing riverfront land.

St. Louis Metro Area Rail Gateway Enterprise

The efforts of the FRA toward resolving the problems of the St. Louis Gateway through railroad improvements were focused into a three phase program entitled the Metro Area Rail Gateway Enterprise or MARGE. The program aimed at accomplishing the following three objectives:

- To improve the efficiency of railroad operations within the St. Louis Terminal
- To reduce rail/community conflicts
- To provide opportunities for economic and community development.

Phase I, which was successfully completed in December, 1977, was limited to the development and preliminary examination of operationally feasible physical restructuring alternatives. This initial study was jointly directed by the Federal Railroad Administration and all the 17 railroads operating in the Terminal.

Phase II, which was begun in January, 1979, is a more comprehensive study to refine the restructuring plans and resolve the various railroad institutional issues as well as the community and environmental impact issues. Phase II includes estimation of costs and benefits for each of the railroads involved, together with a comprehensive cost/benefit analysis of the railroad restructuring, and will culminate in the publication of an Environmental Impact Statement. Managed by the Illinois Department of Transportation (IDOT), under contract to the FRA, Phase II has sought active involvement by the various local communities in the Gateway area, and continued the strong railroad role of Phase I.

Phase III involves final design engineering and actual construction of improvements to the rail yards and corridors in the terminal. It begins after an alternative plan for the restructuring is selected.

Restructuring Alternatives

There are currently some 63 railyards in the St. Louis Gateway. The MARGE project proposes consolidation of many of the smaller rail yards into two or three larger yard facilities. Three "build" alternatives are fully evaluated. Each alternative differs by the number of common carrier yards and by the routing of the corridor traffic. In addition, the existing 1979 conditions and the Year 2000 "No Build" alternative are analyzed and compared.

The actual yard restructuring alternatives exhibit differences in both the number of yards which would be constructed and the manner in which those yards would operate:

- Two-Yard Alternative - This plan calls for the expansion of the two existing classification yards. The Gateway Yard, located south of East St. Louis, would be expanded eastward. This area is partly within the boundaries of Centreville, Illinois and is currently agricultural and residential. The Madison Yard, which is just east of Venice, would be modified and expanded south past the residential areas of Brooklyn and National City.

- Three-Yard Directional Alternative - This plan involves the expansion of Gateway Yard, minor improvements to Madison Yard and the construction of a third yard, the "New Yard". This third yard would be located just south of Madison Yard, adjacent to the town of Brooklyn. Madison Yard would then function as an industrial support yard with the classification functions transferred to New Yard. The Directional distinction refers to the operational plan for the yards, which would have one yard handle trains coming from the East and headed West, and the other coming from the West and headed East.

- Three-Yard Bidirectional - This plan is distinguished from the above only in the operational plan of car and train routing. Each yard would route traffic in all directions. The physical configurations of the yards would be similar to the Directional Plan, except that the New Yard would be located approximately 200 feet further from the residential areas of Brooklyn, and that the expanded Gateway Yard would be constructed about 200 feet farther south from the housing areas of Centreville.

- No-Build Alternative - As a bench mark against which to analyze the "build" alternatives, a "no-build" situation has also been studied. This plan assumes that no improvements are made to the Gateway terminal. The No-Build Alternative assumes that the same traffic levels will exist in St. Louis in the Year 2000 as are projected for the Build cases. This traffic, to the extent it overtaxes the common classification yards, would be handled at individual rail yards.

Several elements of the consolidation are the same across all the "build" alternatives.

- A segment of Illinois Route 3 would be relocated in order to bypass the expanded yards. The designated section begins just north of Merchants Bridge in Madison County as four-lane highway and continues 3 miles south as a two-lane road through Venice and Brooklyn, past National City, ending at St. Clair Avenue in East St. Louis. The relocation would provide a four-lane, limited-access highway for this distance.

- A common trailer-on-flatcar (TOFC) yard would be constructed east of Brooklyn and north of East St. Louis. The location is convenient to a major interchange connecting Illinois Route 203 and Interstate 70, providing excellent access for trucks. A major rail corridor runs just west of the site. Eight or nine of the thirteen Class I carriers would consolidate their TOFC, or piggyback operations into that one yard.

- There are approximately 82 miles of main line rail corridor in the project area, and much of this would be upgraded under all of the build alternatives. Track would be physically improved by laying new or replacement track and modern centralized signaling systems would be installed. Several new rail connections or interlockings would be constructed, but the locations of the corridors and existing interlockings would remain the same. Rail operations and train routings may vary across alternatives, but the basic corridor network does not.

- Sixteen grade-separation structures are warranted under all the build alternatives, due to the large delay- and collision-related conflicts which occur in the project area. Seven of these would be warranted because of yard expansions; the remainder are warranted due to conflicts along the rail corridors. Nine of these structures would also be warranted under the No-Build Alternative.

INTRODUCTION

A number of social and economic factors may be identified in describing any community. The MARGE project may be expected to produce effects on such factors. After presenting a socioeconomic profile of the project area, this report provides a listing of the potentially affected social and economic variables and an analysis of the project's impacts in those particular areas. The profile describes the past and current socioeconomic characteristics of the St. Louis Metro area as well as those of the subareas potentially impacted by the MARGE project. The data gathered here were used in many of the calculations cited in the Environmental Impact Statement (EIS). Secondary sources were used almost exclusively in compiling the profile.

The St. Louis Standard Metropolitan Statistical Area (SMSA) includes counties on both the Missouri and the Illinois sides of the Mississippi River. The Illinois side of the SMSA tends to be less well off economically than the Missouri side. The population of the Illinois portion of the SMSA is approximately one-third that of the Missouri side. Twelve percent of Illinois' population and ten percent of Missouri's are living below the federal poverty level. Additionally, both the unemployment rate and the proportion of long-term unemployed are higher in the Illinois portion. During the 1970's, the Missouri-side population increased slightly, while the Illinois-side population decreased by one percent.

Economic conditions vary within the Illinois portion of the SMSA. This area includes four counties, two (Madison and St. Clair) of which are affected by the project. In general, the residents of Madison County are better off, economically, than those living in St. Clair County. In both counties, over one-third of the employed residents work outside the county. The St. Clair County economy is more dependent on government jobs than is Madison County, while Madison County is highly dependent on manufacturing.

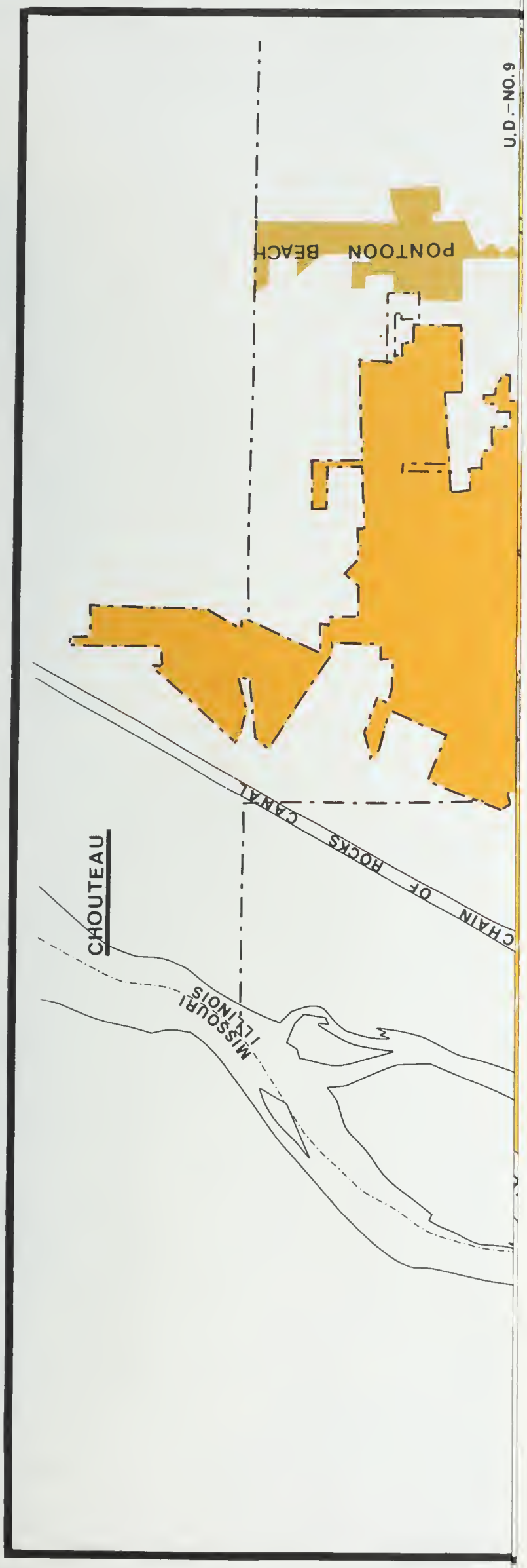


EXHIBIT B

MINOR CIVIL DIVISIONS

VICINITY MAP

LEGEND

COUNTY LINE

TOWNSHIP LINE

SCHOOL LINE

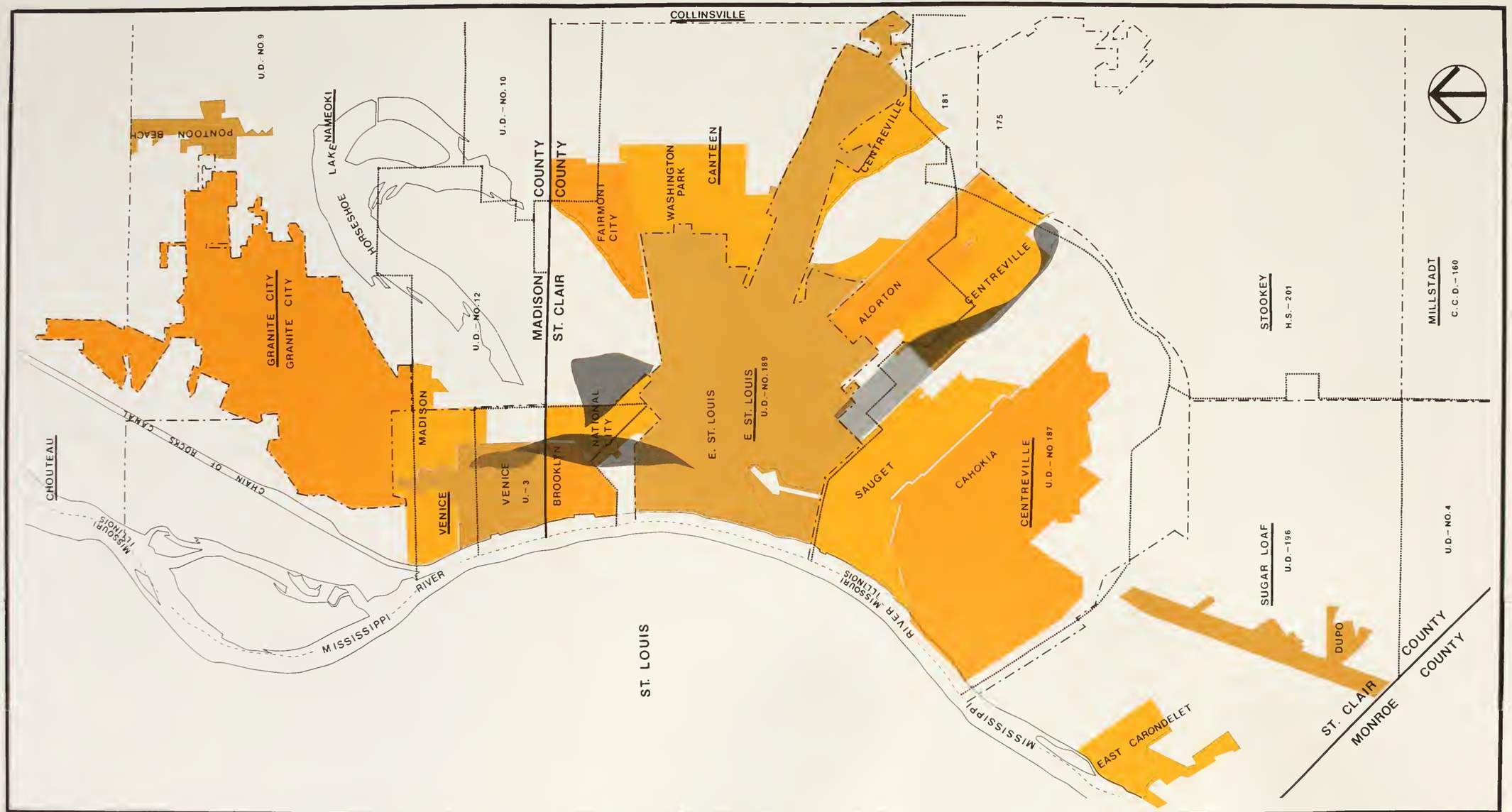
EXISTING RAILROAD YARDS

PROPOSED RAILROAD YARDS

6000 3000 0 5700

SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP/ENVIRODYNE/KNIGHT



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LEGEND

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TOWNSHIP LINE

SCHOOL LINE

EXISTING RAILROAD YARDS

PROPOSED RAILROAD YARDS

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SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP/ENVIRODYNE/KNIGHT

The Displacement and Relocation Effects chapters discuss the project's impacts on residences and businesses. These would occur primarily in the towns of Centreville, National City, and Venice in St. Clair and Madison Counties, Illinois. Exhibit A depicts the Study area and indicates the locations of these towns. Exhibit B shows minor civil divisions in more detail.

Residential displacements are listed by town and estimates are given for the number of structures, households, and people impacted. Estimates of the impact on three special groups (elderly and handicapped, minority, and school children) are also provided. Background information on housing characteristics, such as values and vacancy rates, is included. Business displacements are described in a similar manner and employment and tax estimates are provided for individual affected businesses.

To improve the flow of vehicular traffic within the gateway, a number of rail/highway grade separation structures have been proposed. Displacements attributable to these grade separations are considered along with those caused by other project elements. However, they are presented in tabular form separately (Table 23), since each of the structures may be considered individually and since the towns where these displacements would occur are different than the towns impacted by the other parts of the restructuring. Next, the revenue implications of the residential and business displacements are discussed.

The report also includes discussions on Land Use, Transportation, Public Services and Public Safety, Recreation and Community Values. In addition, changes in the use of energy and natural resources expected to result from project implementation will be described. Further, the specific effects of the construction stage of the project will be of concern, as will the employment resulting from both the building and the operation of the restructured rail facilities. These topics will, therefore, be dealt with in some detail. Other impacts of the construction activity will also be discussed.

In many cases, differences among the restructuring alternatives for these social and economic impact categories are difficult to quantify. For this reason, changes in these variables will be described qualitatively, in terms of overall improvement or worsening of the situation. For the most part, the general effects of the project on the socioeconomic climate of the study area appear to be positive. Achievement of the three primary objectives may be expected to create an atmosphere of optomism in which the economic development so long desired by the Metro East communities can become a reality.

ECONOMIC PROFILE OF THE ST. LOUIS SMSA

The St. Louis SMSA economy is basically sound. The Input-Output Model constructed for St. Louis by Dr. Floyd Harmston of the University of Missouri at Columbia indicates that firms in the St. Louis SMSA sold 40 percent of their goods and services to non-local entities in 1972. This proportion of basic income had increased from 36 percent in 1967. Annual average umemployment rates in this decade have been similar to the national averages as shown in Table 1, while per capita income has been slightly above the national figure.

Economic Subareas of the SMSA:

However, summary statistics for the SMSA hide a wide variation within its economy. The population residing in the Illinois portion of the SMSA is approximately one-third the size of the Missouri side population. Twelve percent of the population on the Illinois side have incomes below the poverty level, while the comparable figure is ten percent on the Missouri side. Only one-sixth of the region's private housing construction in the 1960's occurred in Illinois. Both the unemployment rate and the proportion of long-term unemployed are higher in the Illinois than the Missouri portion of the SMSA. While the Missouri SMSA population increased slightly in the decade 1970 to 1980, the Illinois side population decreased by one percent.

The difference between the two areas is also reflected in the employment figures. While employment in the SMSA increased eight percent from 1973-1979, Missouri SMSA employment increased 25 percent. Illinois SMSA employment decreased 34 percent. The largest decline occurred in the manufacturing sector. In 1962 manufacturing played a larger role on the Illinois side of the river (39 percent of employment) than on the Missouri side (34 percent). By 1979, the proportion of jobs supplied by the manufacturing sector had declined throughout the area. This drop was more precipitous, however, on the Illinois side, a decrease of 18 percentage points compared with an eight point drop on the Missouri side (Tables 2 and 3).

TABLE 1
ST. LOUIS SMSA SOCIO-ECONOMIC ENVIRONMENT

	U.S.	SMSA
A. UNEMPLOYMENT		
1970[1]	4.9	4.9
1980[2]	7.1	6.1
B. PER CAPITA INCOME		
1970[1]	$3,268	$2,992
1978[3]	$7,840	$8,251
C. FAMILY ECONOMIC STATUS (1970)[1]		
% below poverty level	10.7	8.1
% receiving public assistance	5.3	4.9
% receiving social security payments	19.7	19.1
D. ETHNICITY (1970)[1]		
% black	11.1	16.1
E. POPULATION[1]		
1970	203,211,926	2,363,017
1980[4]	226,000,000	2,281,651

[1] U.S. Bureau of the Census.

[2] Annual Planning Information for St. Louis SMSA, 1980.

[3] Bureau of Economic Analysis

[4] U.S. Bureau of the Census preliminary estimate.

TABLE 2

SOCIO-ECONOMIC COMPARISONS:

ILLINOIS AND MISSOURI

PORTIONS OF THE ST. LOUIS SMSA

	MISSOURI	ILLINOIS	ILLINOIS / MISSOURI
A. POPULATION[1]			
1960	1,617,471	487,198	.30
1970	1,826,907	583,256	.32
1980[2]	1,833,200	577,500	.32
% change, 1960-70	12.9	20.0	
% change, 1970-80	0.3	-1.0	
B. UNEMPLOYMENT (%)			
Unemployment Rate[2]			
1970	4.6	5.5	1.20
1980	5.8	7.0	1.21
Long term unemployed as % of labor force[3]	1.2	1.8	1.50
C. EMPLOYMENT[4]			
Covered non-agricultural employment			
(1973)	666,900	257,400	.39
(1979)	833,200	168,900	.20
% change, 1973-79	25	-34	
D. ECONOMIC STATUS (1977)[3]			
% unemployed with 7 or fewer years of education	5.0	11.0	2.20
# white families receiving state assistance	25,075	11,017	.44
# black families receiving state assistance	42,601	13,790	.32
# families receiving ADC	38,511	17,145	.45
# persons below the poverty level (1980)	177,599	67,719	.38
E. HOUSING (1960-71)[1]			
Privately constructed in SMSA	87	13	.15

[1] U.S. Bureau of the Census. [2] Annual Planning Information for St. Louis SMSA, 1980. [3] Metropolitan Data Center - University of Missouri, St. Louis. [4] Missouri Division of Employment Security.

TABLE 3

ST. LOUIS SMSA EMPLOYMENT COMPARISONS

FOR ILLINOIS AND MISSOURI

Employment by Industry (%)	Missouri			Illinois		
	1962	1972	1979	1962	1972	1979
Manufacturing	34	29	26	39	28	21
Mining	0	0	0	1	1	1
Construction	5	4	5	5	4	4
Transportation, Communication, and Utilities	8	7	7	10	9	10
Wholesaling and Retailing	22	23	23	16	18	20
Finance Insurance and Real Estate	6	6	6	3	4	5
Services	15	18	21	11	15	19
Government - Federal	4	4	3	4	4	4
Local	7	10	9	10	17	19

Source: Missouri Division of Employment Security

TABLE 4

COMPARISON OF MADISON AND ST. CLAIR COUNTIES

1978 Earnings Distribution (by %)	Madison	St. Clair
Manufacturing	46.9	16.8
Transportation, Communication, and Utilities	7.6	10.9
Trade	12.2	14.7
Services	11.6	16.3
Government	10.9	23.9
Construction	6.4	8.4

Source: Bureau of Economic Analysis

Economic activity is also unevenly dispersed within the Illinois portion of the SMSA. This area includes four counties, two of which cover the project area. Table 4 provides data on these two counties. The per capita income and transfer payment data indicate the residents of Madison County are better off than those living in St. Clair County. The earnings distribution information indicates the two local economies are very different. In both counties, over one-third of the employed residents work outside the county. The St. Clair County economy is much more dependent on government jobs than is Madison County. In contrast, St. Clair County has a particularly low percentage of manufacturing jobs while Madison County's dependence on manufacturing is unusually high.

Economic characteristics also vary widely within St. Clair County. East St. Louis is the most depressed part of the county. In fact, the economic problems experienced by East St. Louis are more severe than those of the City of St. Louis, which was cited by HUD as one of the ten most distressed cities. Compared to St. Louis, East St. Louis had a larger portion of people with incomes below the regional median in 1969, and experienced a higher unemployment rate. The city's plight is perhaps best summarized by the fact that population fell 16.7 percent in the years 1970-1980 (Table 5).

Population trends for Madison and St. Clair Counties and their subareas in Illinois have followed this same 1970-80 trend (Table 6). The greatest losses occurred in Venice, National City, Alorton, and Brooklyn. Cities which experienced population decreases for both periods, 1960-1970 and 1970-1980, include Venice, Brooklyn, East St. Louis, and Centreville.

Compared to the general age structure for the St. Louis SMSA, communities in Madison and St. Clair Counties appear to be younger (Table 7). Only Madison and Alorton have age structures which resemble that of the SMSA. No community has a greater proportion of elderly than the SMSA average.

TABLE 5

COMPARISON OF EAST ST. LOUIS AND ST. LOUIS CITY

		East St. Louis	City of St. Louis
% With Income Below Region Median (1969)		72	64
% of Region New Private Housing, 1960-69[a]		0.4	8
Population	1970	69,996	622,236
	1980[b]	58,296	558,800
% Change 1970-80		-16.7	-10.2
% Local Government Revenue From:			
Intergovernmental Grants		65%	29%
Property Tax		13	18
Average Annual Unemployment Rate[c]			
1970		10.3	6.4
1977		11.3	10.2

a. Eastwest Gateway Coordinating Council, Comprehensive Area Wide Railroad Consolidation and Relocation Study, Vol. IV: "Economic Factors: St. Louis Region", June 1974 p. 69-70 (noted from the Bureau of the Census, Construction Reports, C-40 series).
b. Preliminary estimate.
c. Bureau of Labor Statistics, Monthly Labor Review; Illinois Department of Labor, Bureau of Employment Security, Research and Analysis staff; and Missouri Department of Labor, Research and Analysis staff.

Source: Bureau of the Census.

TABLE 6
POPULATION CHANGE FOR AREAS IN THE
ILLINOIS PORTION OF THE ST. LOUIS SMSA

	1960	PERCENT CHANGE 1960-70	1970	PERCENT CHANGE 1970-80	1980
Madison County	224,689	11.7	250,934	- 2.4	244,899
Madison	6,861	9.1	7,482	--	--
Venice	5,380	-13.0	4,680	-27.8	3,381
St. Clair County	262,509	8.6	285,176	- 7.9	262,745
Brooklyn	1,922	-11.4	1,702	-22.4	1,321
National City	117	6.0	124	-44.4	69
East St. Louis	81,712	-14.3	69,996	-16.7	58,296
Alorton	3,282	8.9	3,573	-35.5	2,304
Centreville[1]	12,550	-10.9	11,182	-12.2	9,817

[1] Adjusted to four major census tracts: 5027, 5028, 5029, and 5030.

Source: U.S. Bureau of the Census

TABLE 7
AGE STRUCTURE
(1970)

	Less than 18 (%)	18 - 65 (%)	Greater than 65 (%)
SMSA	30	56	14
Madison County			
Madison	31	54	15
Venice	42	45	13
St. Clair County			
Brooklyn	42	40	18
National City	6	78	16
East St. Louis	40	45	15
Alorton	47	43	10
Centreville	44	49	7

Source: Census, 1970.

Labor force participation levels (Table 8) for Madison and St. Clair Counties are not very different from those for the SMSA or the nation. Variations at the subcounty level are more pronounced. Brooklyn, Alorton, and East St. Louis have substantially lower total participation levels, while no municipality has a level of participation greater than either the national or SMSA averages. In Centreville Township, census tract 5026.03 has a substantially higher participation than other areas in the township. Census tracts 5026.04, 5027, and 5028 have significantly lower levels of labor force participation. Census tracts are shown in Exhibit I.

Unemployment in the two counties differs significantly from either the U.S. or SMSA average. Within the Centreville study area, the highest levels of unemployment can be found in Census tracts 5027 and 5028, 19.5 and 13.7 percent, respectively. Lowest unemployment appears to exist in census tracts 5026.03 and 5026.04. Levels for 1980 for affected subareas can be expected to be proportionately higher than the 1980 levels for the counties. Overall unemployment for the U.S. and the SMSA between 1970 and 1980 has increased by roughly 30 percent. But for Madison and St. Clair Counties, the rate has increased 93 percent and 54 percent respectively. In general, the municipalities in the study areas have high unemployment levels and low labor force participation levels.

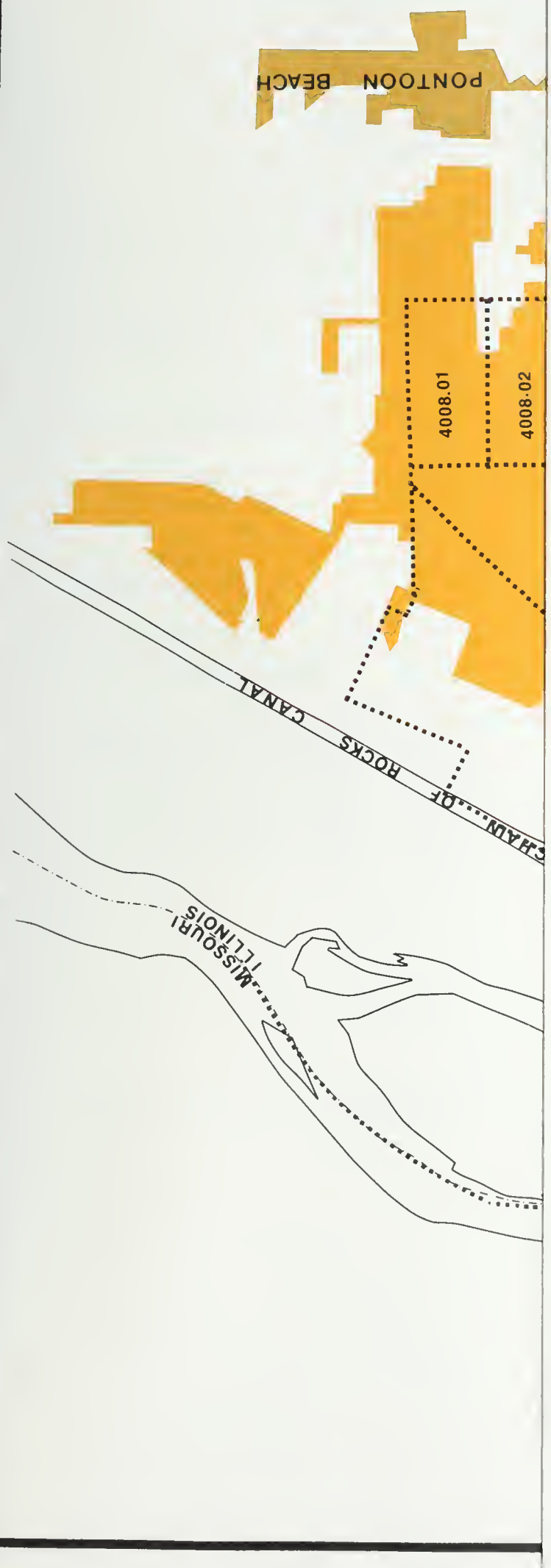
To further illustrate the economic disadvantages of communities within the study area, Table 9 shows the distribution of personal income in comparison with the U.S. and the St. Louis SMSA. Per capita income for the communities is substantially lower than the U.S. or SMSA average (1970). Estimates for 1978 show both the SMSA and Madison County with incomes greater than the U.S. average. St. Clair County and, one would expect, its municipalities have substantially lower per capita incomes in 1978. For 1970, some communities in St. Clair County had per capita incomes lower than half the average for the SMSA.

Neighborhood stability can be partly measured by the level of residential mobility. A community with a high percentage of long-time residents may be said to be relatively stable, while areas frequently experiencing large numbers of families moving in or out is considered less stable.

EXHIBIT I

CENSUS TRACTS (1970)

VICINITY MAP



LEGEND

EXISTING RAILROAD YARD	
PROPOSED RAILROAD YARD	
CENSUS TRACTS	.....
TRACT NUMBER	0000.00

6000 3000 0 5700

SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP / ENVIRODYNE / KNIGHT

EXHIBIT I

CENSUS TRACTS (1970)

VICINITY MAP

LEGEND

EXISTING RAILROAD
YARD
PROPOSED RAILROAD
YARD
CENSUS TRACTS
TRACT NUMBER 0000.00

6000 3000 0 5700

SCALE IN FEET

ST. LOUIS MARGE PROJECT
SVERDRUP / ENVIRODYNE / KNIGHT

TABLE 8

LABOR FORCE PARTICIPATION AND UNEMPLOYMENT RATES

1970

	Total Participation Rate	Male Participation Rate	Female Participation Rate	Total Unemployment Rate (1980)
Madison County	58	79	39	5.7 (11.0)
Madison	56	77	35	5.8
Venice	52	70	36	8.2
St. Clair County	57	78	39	6.1 (9.4)
Brooklyn	44	55	35	5.5
National City	56	72	37	11.0
East St. Louis	49	66	36	10.3
Alorton	48	67	33	11.8
Centreville	53	69	39	13.3
Centreville Township	59	78	41	7.3
census tract 5026.03	64	86	42	3.6
census tract 5026.04	53	76	34	2.2
census tract 5027	45	57	35	19.5
census tract 5028	53	70	37	13.7
census tract 5029	58	71	47	10.6
census tract 5030	57	79	36	9.9
U.S.	58	77	41	4.9 (7.1)
SMSA	59	79	42	4.9 (6.1)

Source: Bureau of the Census.

TABLE 9

PER CAPITA INCOMES

	1970[1] ($)	1978[2] ($)
U.S.	3,268	7,840
St. Louis SMSA	2,992	8,251
Madison County	2,860	8,148
Madison	2,263	--
Venice	1,872	--
St. Clair County	2,579	6,959
Brooklyn	1,457	--
National City	1,594	--
East St. Louis	1,735	--
Alorton	1,386	--
Centreville	1,633	--
Centreville Township	2,306	--
census tract 5026.03	2,639	--
census tract 5026.04	4,374	--
census tract 5027	1,154	--
census tract 5028	1,366	--
census tract 5029	2,056	--
census tract 5030	2,124	--

1 U.S. Bureau of the Census
2 Bureau of Economic Analysis

Comparing the number of families living in the same neighborhood over a certain period with the total number of families in the neighborhood gives an indication of stability. Observing trends, it appears that the SMSA average shows 54% of its families having lived in the same neighborhood over a five-year period. The Illinois portion displays a slightly higher average, with the exception of National City and Alorton which have higher turnover rates. Conclusions drawn from these comparisons should be tempered by the recognition that lack of family mobility may also reflect the inability of poorer families to change their residence.

Table 10 provides data for county and subcounty areas for 1970 and 1980. Statistics for the St. Louis SMSA and the U.S. are included for comparative purposes.

The population of the east side of the St. Louis SMSA is predominantly white, but within the potential impact area there is marked variation. Areas with a majority of black population include: East St. Louis, Centreville City, Brooklyn, Venice, Alorton, and within Centreville, census tracts 5027, 5028, and 5029.

While family incomes for the U.S. and the St. Louis SMSA averaged $9,816 and $11,868, respectively, for 1970, incomes varied between $5,000 and $9,000 for most subcounty areas. The lowest family incomes were found in National City, Alorton, Brooklyn, and Centreville (census tract 5027). This pattern also exists in the data reflecting the percent of families with incomes below the federal poverty level. In Centreville, census tract 5027 is exceptionally depressed with 44 percent of its families having incomes less than the poverty level.

The data show that two places, National City and Centreville (census tract 5026.04), have very large proportions of their families receiving Social Security payments. The cities of Brooklyn, Centreville, East St. Louis, Alorton, and Venice have greater percentages of their families receiving public aid than the U.S. or SMSA average. Within Centreville, census tracts 5027 (20%), 5028 (24%) and 5029 (24%) have high percentages of families receiving public assistance.

TABLE 10
SOCIOECONOMIC DATA FOR
PROJECT SUBAREAS

	Centreville Census Tract 5027		Centreville Census Tract 5028		Centreville Census Tract 5026.03		Centreville Township	
	1970	1980	1970	1980	1970	1980	1970	1980
A. Population								
1. Population	2,876	2,215	3,278	3,144	5,553	6,052	39,136	35,487
2. Households	809	597	825	871	1,475	1,909	10,438	11,055
3. School Children	892	867	950	912	1,855	2,021	13,385	12,137
4. Black Population	99%	--	80%	--	0%	--	27%	--
5. Mean Family Income	$ 5,947	--	$ 7,295	--	$10,888	--	$ 9,880	--
6. Percent Families								
a. Below Poverty Level	44%	--	28%	--	5%	--	12%	--
b. On Public Aid	20%	--	24%	--	3%	--	10%	--
c. Receiving social Security payments	24%	--	13%	--	9%	--	14%	--
B. Housing Stock								
1. Number								
a. Owner	442	326	498	526	1,194	1,545	7,618	8,068
b. Rental	367	271	327	345	281	364	2,820	2,987
c. Vacant	178	48	56	48	124	101	730	533
d. Total	987	645	881	919	1,599	2,010	11,168	11,588
2. Value								
a. Market	$ 6,700	$14,000	$ 8,300	$16,500	$11,400	$23,000	$10,928	$22,000
b. Rent	$ 52	$ 109	$ 59	$ 117	$ 96	$ 190	$ 78	$ 150
3. Vacancy Rate	18%	7%	6%	5%	8%	5%	7%	5%

TABLE 10 (continued)

	Centreville Census Tract 5026.04		Centreville Census Tract 5029		Centreville Census Tract 5030		Centreville City	
	1970	1980	1970	1980	1970	1980	1970	1980
A. Population								
1. Population	1,283	1,302	3,233	2,940	1,795	1,518	11,182	9,817
2. Households	379	416	881	840	566	470	3,081	2,778
3. School Children	393	398	970	882	429	363	3,275	2,857
4. Black Population	0%	--	70%	--	29%	--	74%	--
5. Mean Family Income	$15,989	--	$ 8,444	--	$ 8,887	--	$ 7,645	--
6. Percent Families								
a. Below Poverty Level	5%	--	24%	--	11%	--	27%	--
b. On Public Aid	1%	--	17%	--	10%	--	18%	--
c. Receiving social Security payments	31%	--	19%	--	17%	--	18%	--
B. Housing Stock								
1. Number								
a. Owner	322	353	659	628	381	316	1,980	1,796
b. Rental	57	63	222	212	185	154	1,101	982
c. Vacant	11	8	48	55	43	46	325	196
d. Total	390	424	929	895	609	516	3,406	2,974
2. Value								
a. Market	$21,600	$43,000	$10,700	$21,000	$ 8,300	$16,000	$ 8,895	$17,800
b. Rent	$ 98	$ 200	$ 80	$ 160	$ 80	$ 160	$ 69	$ 140
3. Vacancy Rate	3%	2%	5%	6%	7%	9%	10%	7%

TABLE 10 (continued)

	East St. Louis		Within a Three-Mile Radius[1]		Within a Two-Mile Radius		Within a One-Mile Radius	
	1970	1980	1970	1980	1970	1980	1970	1980
A. Population								
1. Population	69,996	58,296	35,629	34,325	15,280	15,145	8,221	8,161
2. Households	21,516	16,284	9,891	10,760	4,043	4,589	2,157	2,453
3. School Children	19,949	16,614	10,724	--	4,852	--	2,618	--
4. Black Population	69%	--	48%	--	55%	--	64%	--
5. Mean Family Income	$ 7,467	--	$ 8,879	$18,125	8,228	16,329	7,901	15,833
6. Percent Families								
a. Below Poverty Level	29	--	--	--	--	--	--	--
b. On Public Aid	22	--	--	--	--	--	--	--
c. Receiving Social Security Payments	24	--	--	--	--	--	--	--
B. Housing Stock								
1. Number								
a. Owner	10,738	8,127	6,974	--	2,820	--	1,462	--
b. Rental	10,778	8,157	3,153	--	1,412	--	806	--
c. Vacant	2,095	1,571	821	--	444	--	235	--
d. Total	23,611	17,855	10,948	--	4,676		2,503	
2. Value								
a. Market	$ 8,800	$17,500	$10,775	--	9,676	--	9,278	--
b. Rent	$ 63	$ 125	$ 70	--	62	--	60	--
3. Vacancy Rate	9%	9%	7%	--	9%	--	9%	--

TABLE 10 (continued)

	Census Tract 5025 Alorton		Census Tract 4007 Venice		Census Tract 5020 National City		Census Tract 5001 Brooklyn	
	1970	1980	1970	1980	1970	1980	1970	1980
A. Population								
1. Population	3,573	2,304	4,680	3,381	124	69	1,702	1,321
2. Households	934	666	1,371	1,162	41	25	535	482
3. School Children	1,311	846	1,423	1,028	21	4	545	423
4. Black Population	80%	--	62%	--	0%	--	99%	--
5. Mean Family Income	$ 6,082	--	$ 8,482	--	$ 5,492	--	$ 6,649	--
6. Percent Families								
a. Below Poverty Level	35%	--	20%	--	14%	--	32%	--
b. On Public Aid	33%	--	22%	--	0%	--	27%	--
c. Receiving social Security payments	18%	--	18%	--	44%	--	24%	--
B. Housing Stock								
1. Number								
a. Owner	558	398	668	566	0	0	246	222
b. Rental	376	268	703	596	41	25	289	260
c. Vacant	68	84	80	113	1	14	10	42
d. Total	1,002	750	1,451	1,275	42	39	545	524
2. Value								
a. Market	$ 6,500	$13,000	$ 8,200	$16,000	--	--	$ 6,500	$13,000
b. Rent	$ 64	$ 125	$ 56	$ 110	$ 64	--	$ 45	$ 90
3. Vacancy Rate	7%	11%	6%	9%	2%	36%	2%	8%

TABLE 10(continued)

	Madison County		St. Clair County		St. Louis SMSA		United States	
	1970	1980	1970	1980	1970	1980	1970	1980
A. Population								
1. Population	250,934	244,899	285,176	262,745	2,363,017	2,281,651	203,211,926	226,000,000
2. Households	78,470	87,464	86,347	89,981	736,116	--	67,656,566	--
3. School Children	60,224	58,776	85,552	78,824	635,652	--	22,580,289	--
4. Black Population	5%	--	22%	--	16%	--	11%	--
5. Mean Family Income	$10,964	--	$10,362	--	$ 11,868	--	$ 9,816	--
6. Percent Families								
a. Below Poverty Level	7%	--	12%	--	8%	--	11%	--
b. On Public Aid	3%	--	8%	--	5%	--	5%	--
c. Receiving social Security payments	18%	--	19%	--	19%	--	20%	--
B. Housing Stock								
1. Number								
a. Owner	57,580	64,179	58,034	60,476	475,592	--	39,909,900	--
b. Rental	20,890	23,285	28,313	29,505	260,524	--	23,539,800	--
c. Vacant	3,760	5,582	4,973	5,237	47,981	--	4,206,866	--
d. Total	82,230	93,046	91,320	95,218	784,097	--	67,656,566	--
2. Value								
a. Market	$13,900	$27,000	$12,400	$25,000	$ 16,300	--	$ 17,000	--
b. Rent	$ 76	$ 150	$ 74	$ 150	$ 79	--	$ 89	--
3. Vacancy Rate	5%	6%	5%	5%	6%	--	6%	--

Note: Adjustments to the 1980 Preliminary Counts were made according to the methodology found in Appendix C.

[1] Urban Decision Systems, Inc., 1980 supplied this information.

Source: U.S. Bureau of the Census

The value of housing, level of rent, and vacancy rate also illustrate the relative socioeconomic disadvantage present in the study area. Vacancy rates are highest in Alorton, Venice, National City, and Centreville (census tract 5030). Between 1970 and 1980, significant losses in housing stock were experienced in Alorton (-25.2%), Venice (-12.1%), Centreville City (-12.7%) and within Centreville, census tracts 5027 (-34.7%) and 5030 (-15.3%).

The market value of homes in Alorton, Venice, and Brooklyn is noticeably lower than elsewhere in the study area. Additionally, census tracts 5027, 5028, and 5030 in Centreville have low housing values. The lowest rents are paid in Alorton, Venice, National City, and Brooklyn, as well as in Centreville's census tracts 5027 and 5028. On the whole, these data reflect the poor quality of housing in parts of St. Clair County, especially in Centreville and Alorton.

Thus, the areas within Madison and St. Clair Counties that will be impacted by the proposed rail restructuring are generally characterized as predominantly black with low family incomes, high family dependency on Social Security and public assistance payments, substandard housing at very low market value, high unemployment, and low labor force participation levels.

Transportation in the St. Louis SMSA Economic Structure:

St. Louis became a major gateway in the national rail network where coast-to-coast freight service is accommodated through the exchange of cars between railroad companies operating only in the eastern or western halves of the country. Currently, the local rail industry serves three functions: local-freight service to and from regional industries; inter-modal transhipment (which has come to be viewed by the railroads as delivery to or pickup from a local barge or trucking firm, and thus a subset of local-freight service); and inter-line through- freight exchange (or classification) service. Thus, the transportation sector plays a dual role in the St. Louis economy. It is both a sizable industry and an important element in the local infrastructure.

The role played by the transportation industry can be gauged by looking at the industry's size and its links to the other local industries. While the transportation industry does not dominate the St. Louis economy, it is, nevertheless, a substantial sector whether measured by employment or value added. In 1972, the transportation industry employed 43,600 people or 4.8 percent of the SMSA non-agricultural work force (Table 11). (Information for 1972 is provided because that is the date of the latest Input-Output Model. This model provides detailed information about the interactions between industries in the St. Louis SMSA.) These numbers have remained fairly stable. In 1978, 45,500 people were employed in transportation which accounted for 4.5 percent of the total work force.

The input-output model constructed by Dr. Floyd Harmston provides information about the strengths of the linkages between transportation and other sectors of the economy. Taking 1972 as a sample year, the transportation industry transformed $1,117,906 worth of inputs into output valued at the same amount. $872,283, or 78 percent, of these inputs were purchased within the SMSA. This high proportion of locally purchased inputs has been common in recent years. A large portion of these inputs (62 percent) is accounted for by labor.

It may be helpful to express the volume of purchases made by the transportation sector from other industries in terms of the inputs required to produce an additional dollar of transportation services. If the transportation sector produced an additional dollar of services, it would purchase 4.3¢ of petroleum products, hire 48.6¢ of labor, etc. A total of 78¢ would be spent in St. Louis. The impact would not end there, however. Industrial suppliers, such as the petroleum producers, would have to purchase additional inputs to produce the added output (4.3¢ for petroleum products) sold to transportation. Some of these inputs would be purchased in St. Louis while others would be purchased elsewhere. The money spent by the transportation firms would recirculate in the St. Louis economy so that the total effect would be a multiple of initial expenditure. This total effect is measured by the multipliers shown in Table 14. The recirculation of the money paid to industrial suppliers will generate business worth $1.36 for each dollar of transportation services. This is described by the Type I multiplier.

TABLE 12

SIZE OF THE TRANSPORTATION INDUSTRY

	Employment	
	1972	1978
Transportation Industry	43,600	45,500
SMSA Nonagricultural Employment	899,100	1,002,100

Source: Missouri Department of Labor and Industrial Relations, Division of Employment Security

TABLE 13

MULTIPLIERS FOR TRANSPORTATION

Output		Employment	
Type I	1.36	Total	2.06
Keynesian	.70		
Type II	2.05*		

*Numbers do not sum due to rounding.

Source: Input-Output Table, Dr. Floyd Harmston, 1972

It is not the total effect, however. The transportation sector will make an initial expenditure of 48.6¢ for labor and 1.7¢ for local taxes. The newly enriched employees and governments will spend most of their additional income and save part of it. The increased consumer spending will generate additional business for consumer goods industries, which will then purchase additional inputs from industrial suppliers. The effect of increased employee income, along with increased taxes is summarized by the Keynesian Multiplier, which is 0.6955. This means that the hiring of additional labor required to produce one dollar of transportation will generate approximately 70¢ of new business.

The sum of the Type I multiplier (additional business generated by expenditures on industrial inputs) and the Keynesian multiplier (additional economic activity generated by the personal income of the new employees and extra tax revenue) is the total effect of the extra dollar of transportation output. This is known as the Type II Multiplier and is shown in Table 13 to be $2.05.

The Type I multiplier (1.36) which describes the effect of industrial input expenditures, is 20 percent above the calculated average (1.13) for the sectors defined in the input-output model. An above average multiplier indicates the industry has strong ties to the local economy. The high proportion of inputs purchased within the St. Louis economy probably explains the strength of these ties.

The Keynesian multiplier for transportation is also above average, 0.70 compared to an average of 0.54. This is not surprising since the transportation industry's expenditure on labor is also relatively high.

The transportation industry generates substantial benefits for the St. Louis area. Sales of transportation services to entities outside the SMSA brought $210,603,000 into the SMSA in 1972, representing 19 percent of total sales. This accounted for 12 percent of the area's Basic income. Another attractive feature of this industry is that in addition

to being a relatively labor intensive industry, wages are relatively high. Earnings per employee were $11,758 in 1972 which was 22 percent greater than the mean earnings of $9,600[1].

The transportation industry is comprised of several components; railroads, trucks, water, air, pipeline and the local system. The proportion of transportation workers employed by railroads has declined from 29 percent in 1972 to 22 percent in 1980. Table 14 indicates that while employment has declined in the warehousing and pipeline sectors, substantial increases have occurred in air and water transportation employment.

The multiplier impacts described above are short-term. That is, they pertain to the amount of additional local business generated in direct response to an expansion in the transportation industry. In addition to its role as an industry, this sector also functions as an important part of the local infrastructure, providing services to all other local industries.

One illustration of the importance of this aspect of transportation is provided by the historical development of St. Louis. The pattern is typical; good transportation attracts trade which attracts manufacturing. The result of this process is shown in Table 15. When percentage contributions to total income are compared by subtracting national figures from regional ones, sectors in which the St. Louis SMSA is particularly strong are seen to be Manufacturing (especially of non-durables), Transportation Communication and Utilities, and Wholesale Trade. The SMSA has proportionately less activity in the Farm, Mining, and Government Sectors.

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1 Division of Employment Security.

TABLE 14

COMPONENTS OF TRANSPORTATION

	Employment	
	Year 1976	Sept. 1980
Transportation	42,930	44,500
Railroad	10,710	9,900
Truck	17,260	17,700
Warehouse	1,580	400
Water	2,820	3,600
Air	4,300	6,600
Pipeline	2,030	200
Local System	4,230	4,800

Source:
Missouri Department of Labor and Industrial Relations, Division of Employment Security affiliated with Employment and Training Administration, U.S. Department of Labor

TABLE 15

ST. LOUIS SMSA ECONOMIC STRUCTURE

COMPARED TO THE U.S.

1978

(Percent of Total Income by Employment Category)

			Difference
	SMSA	US	SMSA-US
Farm	0.5	2.5	-2.0
Agricultural Service	0.2	0.4	-0.2
Mining	0.6	1.6	-1.0
Construction	6.0	6.1	-0.1
Manufacturing	31.6	26.2	5.4
Durables	10.0	9.2	0.8
Non-Durables	21.6	17.0	4.6
Transportation, Communication, and Utilities	9.4	7.6	1.8
Wholesale Trade	7.5	6.6	0.9
Retail Trade	9.7	10.0	-0.3
Finance Insurance and Real Estate	5.4	5.8	-0.4
Services	16.9	16.8	0.1
Government	12.2	16.4	-4.2
TOTAL INCOME	15,843,537	1,318,750,000	SMSA/US = 1.2%

Local Area Personal Income, 1973-78, Bureau of Economic Analysis

RESIDENTIAL DISPLACEMENTS[1]

Residential displacements from aspects of the build alternatives would occur in only six communities and one unincorporated area of Metro East, Illinois. In three of the affected areas - Centreville, National City and the Stites/Canteen Township site - displacements would be caused by yard construction. Three, Brooklyn, Venice and East St. Louis, would be affected by the relocation of Route 3, while Alorton would be impacted only by a rail connection, or interlocking. The project would not affect any homes in St. Louis.

Since the project also includes the construction of grade separations to eliminate auto/rail conflicts, a number of locations were analyzed with respect to amount of train and auto traffic. Delay and safety factors were also considered in the "warranting" process. Of the sixteen to eighteen locations which were warranted, seven would be required for streets affected by yard expansions. The remainder are located at conflict points along the rail corridors and their construction would be optional.

Displacements which could result from constructing the optional grade separation structures are detailed in Table 22. Locations of these crossings are shown in Exhibits C and D of the Technical Supplement entitled Grade Separation Analysis. The numbers represent maximum estimates; final design work is expected to reduce the actual number of required displacements. If all optional structures were constructed, 85 residential structures would be displaced, most which are single-family dwellings. These displacements would occur at in Cahokia, Dupo, and Granite City.

Alorton:

The City of Alorton would be impacted by only one rail connection. Five houses and two mobile homes are involved (Table 16). The impacted population of approximately 24 people represents one percent of Alorton's

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[1] Methodology used in identifying potential displacements is found in Appendix B. 1980 preliminary census estimates were adjusted using the methodology described in Appendix C.

TABLE 16

ALORTON IMPACTS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]			
# Structures	7	7	7
# Single Family Dwellings	5	5	5
# Mobile Home Dwellings	2	2	2
# Multiple Family Dwellings	0	0	0
# Vacant	0	0	0
Population			
# People[2]	24	24	24
# Households[1]	7	7	7
# Elderly[3]	2	2	2
# Children[3]	11	11	11
# Handicapped[1]	0	0	0
Churches[1]			
# Occupied	0	0	0
# Vacant	0	0	0
Businesses[1]			
# Active Firms	0	0	0
# Vacant Commercial Bldgs.	0	0	0
# Employees	0	0	0
$ Property Tax Paid[4]	0	0	0
Property Tax ($)[4]	-588	-588	-588
Other[1]:	0	0	0

Sources:
1 Data gathered by SEK through field observation, public meetings, and from maps and air photos.
2 SEK calculations based on area's average household size as obtained from the 1980 Census.
3 SEK calculation based on 1970 Census information.
4 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.

total population. While Alorton has very few houses for sale (at last count four were on the market), adequate numbers and types are available in East St. Louis. The five impacted houses have an average market value of about $13,000.

Brooklyn:

The eastern and split alignments for relocating Route 3 would displace two structures (one vacant), estimated to house three people (Table 17). Suitable replacement housing is available within three miles of Brooklyn and Venice. No other impacts are anticipated.

Unincorporated Areas in Canteen and Stites Townships:

Under either Three-Yard Alternative, three single-family dwellings and eight people would be displaced by the New Yard (Table 18). These people presently live on railroad-owned property and may be considered squatters.

East St. Louis:

Under all design alternatives rerouting Route 3 through East St. Louis would involve relocating two single-family units (six people) and purchasing three vacant dwelling units. (Table 18).

Centreville:

The City of Centreville is affected only by the proposed expansion of Gateway Yard which would occur in any of the build alternatives. A mimimum 50 foot right-of-way is required beyond the limits of new rail construction. Where noise mitigation is required, up to 200 feet of right-of-way may be required beyond the limits of new rail construction. Estimates of displacements are based on these design considerations and derived by following the guidelines listed in Appendix B. Since Centreville would experience the largest number of displacements in the project area, the discussion presented here is longer than for the other communities. For clarity, the impacts are listed by alternative with replacement housing and property values broken out separately.

TABLE 17

BROOKLYN IMPACTS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]:			
# Structures	2	2	2
# Single Family Dwellings	1	1	1
# Mobile Home Dwellings	0	0	0
# Multiple Family Dwellings	0	0	0
# Vacant	1	1	1
Population:			
# People[2]	3	3	3
# Households[1]	1	1	1
# Elderly[3]	0	0	0
# Children[3]	0	0	0
# Handicapped[1]	0	0	0
Churches[1]:			
# Occupied	0	0	0
# Vacant	0	0	0
Businesses[1]:			
# Active Firms	1	1	1
# Vacant Commercial Bldgs.	0	0	0
# Employees	0	0	0
$ Property Tax Paid[4]	0	0	0
$ Property Tax[4]	19,609	19,609	19,609
Other[1]:	1	1	1

Note: Displacements listed above are based on the eastern alignment and the split alignment of Route 3. If the western alignment is used, no displacements result.

Sources:
1 Data gathered by SEK through field observation, public meetings, and from maps and air photos.
2 SEK calculations based on area's average household size as obtained from the 1980 Census.
3 SEK calculation based on 1970 Census information.
4 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.

TABLE 18

IMPACTS TO UNINCORPORATED PARTS
OF CANTEEN AND STITES TOWNSHIPS AND EAST ST. LOUIS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]:			
# Structures	5	8	8
# Single Family Dwellings	2	5	5
# Mobile Home Dwellings	0	0	0
# Multiple Family Dwellings	0	0	0
# Vacant	3	3	3
Population:			
# People*	6	14	14
# Households[1]	2	5	5
# Elderly*	1	2	2
# Children*	0	1	1
# Handicapped[1]	0	0	0
Churches[1]:			
# Occupied	0	0	0
# Vacant	0	0	0
Businesses[1]:			
# Active Firms	5	6	6
# Vacant Commercial Bldgs.	1	1	1
# Employees	10	13	13
$ Property Tax Paid[2]	2,076	2,076	2,076
$ Property Tax[2]**	15,125	62,501	64,312
Other[1]:	0	1	1

* Computation based on 1980 survey of National City (including surrounding unincorporated areas).
**East St. Louis only.

Sources: 1 Data gathered by SEK through field observation, public meetings, and from maps and air photos.
2 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.

- Two-Yard and Three-Yard Directional

An estimated 102 households comprised of 369 people are within the 200-foot right-of-way of both the Two-Yard and Three-Yard directional alternatives (Table 19). This represents about 12 percent of the population in the relocation area (Census Tract 5028), or four percent of the population in Centreville City. (Census Tracts are shown in Exhibit 1.)

An estimated 37 elderly people and slightly more than 170 children may be affected by either alternative. No handicapped persons are known to live in the relocation area, with the exception of elderly people having age-related handicaps. The relocatees are predominantly black (over 95 percent).

Approximately 100 residential structures would be displaced by either alternative; four churches (plus one vacant church) might also be displaced. Only five of the residential structures are vacant at the present time. Approximately 18 percent of the structures are mobile homes averaging less than $10,000 in value; these could be readily moved. It is estimated that the value of the other structures varies between $10,000 and $15,000. Within census tract 5028, the quality and value of homes which would be impacted by the proposed project are considered among the poorest in the area. Most of these homes are owner-occupied.

- Three-Yard Bidirectional

This plan would displace about 30 percent fewer residential structures than the other two alternatives. Approximately 73 households (an estimated 264 persons) will be affected by the Bidirectional plan. This represents about eight percent of those living in census tract 5028, or three percent of the total population of Centreville. Twenty-six elderly people are estimated to be involved along with 124 children. As with the other alternatives, nearly all of the potential relocatees are black.

- Replacement Housing

National and local sources were used to establish the availability of housing in the Centreville area. First, census data for one-, two- and three-mile rings around the relocation area was evaluated and second, local real estate firms, broker's opinions, and listings from newspapers were considered.

The census data on population and housing stock (1970)[1] shows that the relocation area has socioeconomic characteristics below those for areas within one, two, or

TABLE 19

CENTREVILLE IMPACTS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]:			
# Structures	103	103	72
# Single Family Dwellings	81	81	54
# Mobile Home Dwellings	19	19	15
# Multiple Family Dwellings	3	3	3
# Vacant	5	5	2
Population:			
# People[2]	369	369	264
# Households[1]	102	102	73
# Elderly[3]	37	37	26
# Children[3]	173	173	124
# Handicapped[1]	0	0	0
Churches[1]:			
# Occupied	4	4	2
# Vacant	1	1	1
Businesses[1]:			
# Active Firms	6**	6**	3***
# Vacant Commercial Bldgs.	2	2	2
# Employees	14	14	7
$ Property Tax Paid[4]	$ 1,820	$ 1,820	$ 1,370
$ Change in Property Tax[4]	$98,395	$98,395	$84,454
Other[1]:	0	0	0

* For computational purposes, Centreville City includes Census Tract 5028 and some areas in unincorporated Centreville Township.

** Four additional home-based businesses, each with estimated employment 1-5

***Two additional home-based businesses, each with estimated employment 1-5

Sources:1 SEK - field observation, public meetings, maps and air photos. Note: Some structures house more than one family while some households occupy more than one structure. For example a household may occupy a single family home and a mobile home on the same property.
2 SEK calculations based on average household size from 1980 Census.
3 SEK calculation based on 1970 Census information.
4 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.

three miles. As one moves farther from the relocation area, the average value of homes increases as do rents. The data suggest a 1970 vacancy rate of nine percent within one mile of the relocation area, 9.5 percent within two miles, and 7.5 percent within three miles. Since 1970, however, many homes have been purchased in the local area for the new route I-270, which involved the relocation of about 50 families. Prior to that, the railroads purchased several city blocks of homes to expand Gateway Yard in an area adjacent to the present relocation area. Hence, a greater demand exists for housing in general. Centreville's mayor has indicated that a long list of people are waiting for public housing in Centreville.

Checking with local real estate firms, brokers, and in newspaper listings for properties within three miles of the relocation area revealed only 12 residences in Centreville and 46 within three miles which are decent, safe, and sanitary and available for sale. Many of the units within three miles are substantially better quality and more expensive units than the relocation properties, however.

- Property Values

Introducing new track into a residential neighborhood may lower the property value of lots adjacent to the new railroad. Approximately 15 houses that are currently located away from railroad tracks would be adjacent to the rail yard under the two directional plans. Track would be introduced next to 13 houses with the Three-Yard Bidirectional plan. Conversations with two realtors suggest that the maximum impact on the value of a $10,000 - $15,000 house would be approximately $700.

National City:

The City of National City is unique in that its 39 homes are entirely owned by two corporations, the National Stockyards Company and the Swift Company. National City needs to retain its housing in order to remain incorporated. The units were built in the very early 1900's and have deteriorated. Under both Three-Yard Alternatives, all of the housing stock in National City would be displaced (Table 20) by the construction of the New Yard.

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1 This analysis was obtained from a computerized data source for which 1980 data was unavailable. Preliminary 1980 census data has been used elsewhere in this report.

TABLE 20

NATIONAL CITY IMPACTS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]:			
# Structures	0	39	39
# Single Family Dwellings	0	25	25
# Mobile Home Dwellings	0	0	0
# Multiple Family Dwellings	0	0	0
# Vacant	0	14	14
Population:			
# People*	0	69	69
# Households[1]	0	25	25
# Elderly*	0	11	11
# Children*	0	4	4
# Handicapped*	0	2	2
Churches[1]:			
# Occupied	0	0	0
# Vacant	0	0	0
Businesses[1]:			
# Active Firms	0	2**	2**
# Vacant Commercial Bldgs.	0	2	2
# Employees	0	40	40
$ Property Tax Paid[2]	0	9,031	9,031
$ Change in Property Tax[2]	937	5,516	6,655
Other[1]:	0	0	0

* Computation based on 1980 survey by City of National City.
** An additional business has announced its intention to close.

Sources: 1 Data gathered by SEK through field observation, public meetings, and from maps and air photos.
2 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.

Twenty-five occupied single-family dwellings would be affected along with 14 presently vacant single-family dwelling units. The occupied units house approximately 69 people of which 11 are elderly, two are of minority status and four are children. Rents paid for this housing average less than $50 per month. Leases are renewed monthly.

No value has been placed on the National City properties since there are no comparable structures in the area and they have never been on the market. It has been suggested, however, that the properties are substandard in their present condition and could not be physically moved to another location.

No replacement housing exists in National City and no rental units are available. However, suitable and sufficient land is available for the construction of new housing within the incorporated city limits.

Venice:

Table 21 summarizes the project impacts in Venice. A rail connection to the Merchants Bridge from Q corridor will displace two housing structures (one of which is a mobile home). An estimated six people will be affected.

Relocating Route 3 would cause residential displacements on the westernmost edge of the city in an area that is separated from the city proper by both the Q corridor and the existing Route 3/McKinley Bridge approach complex. All Route 3 alignments would displace 16 occupied structures which have 20 households (or an estimated 58 people.) Five of the structures could possibly be retained if access were maintained. It is estimated that eight persons are elderly and that 25 are children. The value of this housing is estimated to be less than $15,000 per unit and rents average less than $110 per month. A survey of neighborhoods in Venice revealed that suitable and sufficient numbers of replacement housing units are presently available.

TABLE 21

VENICE IMPACTS

IMPACT VARIABLE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Housing[1]:			
# Structures	24	24	24
# Single Family Dwellings	14	14	14
# Mobile Home Dwellings	2	2	2
# Multiple Family Dwellings	2	2	2
# Vacant	6	6	6
Population:			
# People[2]	64	64	64
# Households[1]	22	22	22
# Elderly[3]	8	8	8
# Children[3]	27	27	27
#Handicapped[1]	0	0	0
Churches[1]:			
# Occupied	0	0	0
# Vacant	0	0	0
Businesses[1]:			
# Active Firms	3	3	3
# Vacant Commercial Bldgs	0	0	0
# Employees	11	11	11
$ Property Tax Paid[4]	380	380	380
$ Change in Property Tax[4]	-4,627	-4,967	-4,967
Other[5]:	3	3	3

Sources: 1 Data gathered by SEK through field observation, public meetings, and from maps and air photos.
2 SEK calculations based on area's average household size as obtained from the 1980 Census.
3 SEK calculation based on 1970 Census information.
4 SEK derived from county property tax records. The dollar figures given are the net changes in property tax revenues, collected only by the municipality, resulting from each alternative.
5 Includes part of a park, a storage tank and the US Corps of Engineers Venice Depot.

TABLE 22

COMMUNITY IMPACTS RESULTING FROM GRADE CROSSINGS

IMPACT VARIABLE		CAHOKIA			CANTEEN TOWNSHIP	COLLINSVILLE TOWNSHIP		DUPO	GRANITE CITY	SAUGET	WASHINGTON PARK*
Grade Crossing Number:**		#44	#45	#46	#52	#18	#19	#47	# 3	#43	#24
Housing[1]:	# Structures	20	41	0	0	0	0	12	12	0	0
	# Single Family Dwellings	19	41	0	0	0	0	12	9	0	0
	# Mobile Home Dwellings	1	0	0	0	0	0	0	1	0	0
	# Multiple Family Dwellings	0	0	0	0	0	0	0	2	0	0
	# Vacant	0	0	0	0	0	0	0	0	0	0
Population:	# People[2]	61	125	0	0	0	0	32	43	0	0
	# Household[1]	20	41	0	0	0	0	12	16	0	0
	# Elderly[3]	3	6	0	0	0	0	4	6	0	0
	# Children[3]	26	54	0	0	0	0	11	15	0	0
	# Handicapped[1]	0	0	0	0	0	0	0	0	0	0
Churches[1]:	# Occupied	0	1	0	0	0	0	0	0	0	0
	# Vacant	0	0	0	0	0	0	0	0	0	0
Businesses[1]:											
	# Active Firms	2	2	1	0	0	2	1	6	1	2
	# Vacant Commercial Bldgs.	0	0	0	0	0	0	0	0	0	0
	# Employees	5	11	5	0	0	8	3	85	5	50
	$ Property Tax Paid	$1,286	$1,007	$663	0	0	$3,639	$1,250	$13,659	$ 91	$2,678
Municipality:											
	$ Property Tax[4]	$2,225	$5,226	$195	--	$ 0	--	$ 400	$ 3,973	$109	$ 198
Other[1]:		0	2	0	0	0	0	0	0	1	1

* Includes Washington Park and an adjacent unincorporated area.

** The grade crossings are possible with all plans, except that #19 is possible only with the three-yard bidirectional plan and #24 is possible only with the two- and three-yard directional plans.

Sources: 1 Data gathered by SEK through field observation, public meetings, and from maps and air photos. A description of items included under "Other" is contained in the text.
2 SEK calculations based on area's average household size as obtained from the 1980 Census.
3 SEK calculations based on 1970 Census information.
4 SEK derived from county property tax records.

BUSINESSES RELOCATIONS

In addition to the residential displacements described in the previous chapter, the project will affect a number of businesses throughout the project area. Table 23 summarizes the information gathered on businesses expected to be relocated.

Only two communities, Centreville and National City, would experience business dislocations resulting from yard construction, but unincorporated areas in Stites and Canteen Townships would also see impacts on several home-based businesses. These townships would also be affected by construction of the common TOFC yard. The remainder of the displacements would occur in Venice, Brooklyn and East St. Louis, associated with the relocation of Illinois Route 3. Two St. Louis businesses would be affected by the construction of a rail connection to McKinley Bridge.

As mentioned in the previous chapter, there would be business displacements resulting from the construction of grade separations (Table 22). If all were built, 17 businesses would have to relocate. The affected communities are: Cahokia Collinsville Township, Dupo, Granite City, Sauget and Washington Park. Some farm land in Canteen Township would also be affected by grade separation construction. Here again, these estimates are based on preliminary design plans; refinements may reduce these impacts.

These impacts are listed below by community, along with descriptions of employment and, where possible, estimates of tax revenues currently generated by these businesses. In some cases, businesses are operated out of residences and the taxes paid by these concerns will have been accounted for in residential property taxes. This fact will be noted where relevant.

Brooklyn:

The Eastern and Split Plans for relocating Route 3 would displace an American Car Foundry (ACF) facility in Brooklyn, which is leased from the N&W Railroad. It includes an elevator and a fueling station in addition to the main building. Employment is estimated between one and 10. In addition, a storage tank may be displaced.

Unincorporated Areas in Canteen and Stites Townships:

Three small-scale family-operated hog operations would be affected. One operation is located in Stites Township, while the others are in Canteen Township. Three families apparently live on the premises of the Stites Township site; they feed hogs and rent pens for $5-$10 per month. No other employees appear to be involved at the other sites. One of the operations is apparently conducted rent-free on railroad- owned land.

The seasonally-operated St. Louis International Raceway would be displaced by the TOFC yard. The 85-acre raceway includes a large metal building, parking lot, grandstand, and a drag strip. The number of seasonal employees is about 10-20; the 1979 property tax was $891. A disco operation, "Stages", also uses the raceway site, and has recently acquired a portion of it. No more is known about the nature of this business and information about the number of employees is unavailable. The TOFC yard will also require some land currently being leased by a farmer to raise soybeans and winter wheat.

Centreville:

Four types of businesses would be displaced by the Two-Yard and Three-Yard Directional plans in Centreville: small retail operations, home-based service businesses, a warehouse, and small agricultural operations. The project would displace a neighborhood restaurant (Smokey Bill's), an auto repair shop (Lou's Place), and the Pool Hall. Each business employs fewer than five people. These businesses were described

TABLE 23

POTENTIAL IMPACTS ON ACTIVE BUSINESSES

	ESTIMATED EMPLOYMENT	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Brooklyn				
American Car Foundry	1-10	X	X	X
Canteen and Stites Townships, Uninc. areas				
St. Louis International Raceway*	10-20	X	X	X
hog operations (2)	1-5	X	X	X
hog operation	1-5		X	X
farm	1-5	X	X	X X
Centreville				
Smokey Bill's	1-5	X	X	
Lou's Place	1-5	X	X	
Pool Hall	1-5	X	X	
farm	1-5	X	X	X
hauling and plowing business	1-5	X	X	X
upholstering business	1-5	X	X	X
sanitation service	1-5	X	X	
antique refinishing business	1-5	X	X	
hog operation	1-5	X	X	X
Bi-State Warehouse	4	X	X	X
East St. Louis				
The 52 Club	1-5	X	X	X
junkyard	1-5	X	X	X
National City				
Packers By-Products	7		X	X
Royal Packing**	33		X	X
St. Louis, Missouri				
Smith & Brennan Pile Company***	105	X	X	X
Transport Motor Express***	10	X	X	X
Venice				
McKinley Bridge Office	6	X	X	X
tavern	1-5	X	X	X
junkyard	1-5	X	X	X

* seasonal operation
** plant recently closed
*** partial taking

by local residents as family operations employing primarily family members. Annual property taxes paid by these operations are: Smokey Bill's - $331, Lou's Place - $20, Pool Hall - $99. Smokey Bill's and the Pool Hall are located in single-family residential areas and provide a place for neighborhood residents to meet and socialize.

In addition, the project would displace some service businesses based in homes. Local residents described a hauling and plowing business, an upholstering business, sanitation service and antique refinishing operation. The first and third businesses require space to park equipment while the other two are currently operated from the basements of homes. All four businesses were described as family operations. The property taxes paid on these properties are accounted for in the description of residential property taxes.

The project would also displace farmland just south of Route 157 and a marginal hog operation west of the Gateway Yard. Finally, access to the Bi-State Warehouse would be cut off. Approximately four workers are employed at this facility.

Since the Three-Yard Bidirectional Alternative requires less land for Gateway Yard improvements than the Two-Yard and Three-Yard Directional plans, fewer businesses would be affected. Only the hauling-plowing business, the upholstering service, the farmland and the hog operation would be displaced by this plan.

East St. Louis:

Relocating Route 3 would displace a bar in East St. Louis, which has an estimated employment of fewer than five people and estimated taxes of less than $300. It would probably have difficulty relocating in a comparable existing structure in the immediate vicinity of its present location. A small-scale junk yard operation near the bar would also be displaced; the operator appears to be self-employed.

National City:

The proposed New Yard (in both Three-Yard Alternatives) would require the 6.12 acres of land now occupied by the Royal Packing Company. This firm employed 90 people and paid property taxes of $8,102 on an assessed value of $111,633 in 1980. Early in January 1981, the Royal Packing Company announced its intention to close the plant; it will, however, maintain a portion of the facility for packaging activities. This will allow the consolidation of operations conducted at other sites, and will continue the employment of 33 people. All would be displaced by the New Yard.

The project would also displace a smaller firm in National City, Packer's By-Products. This firm employs seven people and occupies 1.12 acres. It pays property taxes of $929 on an assessed value of $10,946. It could be relocated nearby within the corporate limits of National City.

St. Louis, Missouri:

Two firms would suffer partial takings to provide interlockings, Smith & Brennan Pile Company and Transport Motor Express, Inc. Taxes paid are $4,433 and $4,845, respectively.

Venice:

Relocating Route 3 would displace a bar north of the McKinley Bridge in Venice. It is small with an estimated employment of fewer than five people and estimated taxes of less than $300. Additionally, a storage tank may be displaced.

The project would also displace the McKinley Bridge office, which is rented from the City of Venice. Four full-time and three part-time employees are involved. The office could be satisfactorily relocated as a part of the Route 3 relocation construction.

Three new interlockings would be built between Q corridor and the Merchants Bridge. One would displace a small-scale junk yard operation from its current location south of the bridge. The entrepeneur appears to be self-employed. A second interlocking would displace some park land (see RECREATION under Section II). The third would encroach on land occupied by the United States Army Corps of Engineers Granite City Depot.

GOVERNMENT REVENUE IMPACTS

Local governments receive revenue from diverse sources; the proposed project would affect four of these. Constructing the new facilities would change the property taxes collected from railroads. Tax revenues on displaced real estate would be lost, although relocated activities may generate offsetting real estate tax income. Resumption of train traffic on the McKinley Bridge would increase the tolls collected by the City of Venice. Finally, cities receiving intergovernmental transfers based on population may be affected by relocation. Exhibit B depicts the locations of the relevant minor civil divisions.

Each plan's effects on the property tax revenues of St. Clair County taxing districts are shown in Tables 24 to 26; comparable information for Madison County is provided in Tables 27 and 28; all tables assume fixed tax rates. The following types of districts collect property taxes: county, township, road and bridge, city, school, college, health, hospital, sanitary, fire, and park. For each district, the tables show both current revenues and the change in revenue expected to result with the project. The total impact shown in Tables 24 through 26 for St. Clair County is an increase of two or three percent of current property tax revenue. The total impact on Madison County taxing districts (shown in Tables 27 and 28) would be an increase of less than one percent of current property tax revenue.

The State of Illinois (Department of Revenue) computes railroad taxes by assessing the total system value of each relevant railroad company, dividing that figure by the number of miles of track to obtain the system assessed value per mile, and then multiplying the value of the trackage in each district (mileage times assessed value per mile) by each district's tax rate. The project will increase the track mileage of two railroads: the Terminal Railroad Association (TRRA) and the Alton and Southern (A&S), both of which have relatively high assessed values. To estimate the tax changes, all new track to be constructed as a part of this project was assigned a value equal to the average of the TRRA and A&S values, $22,524 per mile. Track to be removed was assigned its current assessed value. The total assessed value of track to be added or removed in each district was then multiplied by the tax rate to obtain the project's impact on the district's railroad tax revenues.

The City of St. Louis has set an assessed value of $22,050 per mile on track owned by the Illinois Terminal Railroad (IT) in the City of St. Louis. The proposed interlocking located in St. Louis northwest of the McKinley Bridge will add 1.67 miles of track to the IT holdings. With a tax rate of $6.25 per $100 of assessed value, this interlocking would increase tax revenues in St. Louis by $2,300 per year. (Note property tax losses to St. Louis under Business Relocations.)

Revenue from property tax on land and improvements would also be affected by the project. Taxes collected in 1979 on the properties likely to be acquired by the project are also listed in the tables. The revenue impact shown does not encompass the possibility that households or businesses displaced by the project may build new units thus increasing tax revenues elsewhere in the affected districts. This may possibly occur on a significant scale in National City and/or Centreville if new housing is built. Quantifying this impact would be premature.

According to a contract between the City of Venice and the Illinois Terminal Railroad, the city receives fixed annual payments from the Illinois Terminal Railroad for the first 200,000 rails cars per year that cross the McKinley Bridge, and $1 for each additional car. The fixed annual payment is $250,000 until 1988 and $25,000 from 1988 until 2008.

At present, the bridge carries no rail traffic. Daily rail traffic and annual revenue projections under the various alternatives are listed below:

	# Rail Cars/Day	Variable Revenue/Year*
1979 no build	0	0
2000 no build	0	0
2000 2 Yard Directional	2,254	$408,580
2000 3 Yard Directional	1,571	$224,170
2000 3 Yard Bidirectional	2,505	$476,350

* Variable revenue is calculated by 1) multiplying the number of rail cars per day by 270 working days per year; 2) subtracting 200,000 rail cars per year and 3) multiplying by $1 per car.

Source: SEK, 1980.

TABLE 24

PROPERTY TAX REVENUE IMPACT OF THE
TWO-YARD DIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
COUNTY GENERAL	$-1,859	$ 8,990	$ 7,131	$ 917,502	a%
COUNTY OTHER	-11,370	68,535	57,165	6,818,011	a
TOWNSHIP					
Stites	-224	9,786	9,562	63,162	15
Canteen	-518	99	-419	133,369	a
East St. Louis	-83	17,300	17,217	326,902	5
Centreville	-2,952	28,435	25,483	410,155	6
Sugar Loaf	-457	--	-457	95,978	a
Collinsville	-86	--	-86	117,170	a
ROAD AND BRIDGE					
Canteen	-220	--	-220	57,190	a
Centreville	-1,253	12,449	11,964	175,003	6
Sugar Loaf	-330		196	69,400	a
Collinsville	-167		-167	228,119	a
CITY					
Village of Sauget	-109	--	-109	974,195	a
Village of Brooklyn	-146	19,755	19,609	55,344	35
Village of National City	-144	1,081	937	12,233	8
City of East St. Louis	-753	15,878	15,125	2,983,132	a
City of Centreville	-3,257	--	-3,257	231,522	-1
Village of Alorton	-664	76	-588	90,892	-1
Village of Cahokia	-7,646	--	-7,646	762,548	1
Village of Washington Park	-198		-198	126,677	a
Village of Dupo	-400		-400	30,778	a
SCHOOL DISTRICT					
Unit 189	-16,484	175,965	159,581	4,107,435	4
Unit 188	-4,466	54,534	50,068	115,985	43
Unit 187	-20,200	37,946	17,746	2,317,011	a
Unit 10	-2,577		-2,577	3,909,451	a
Unit 196	-2,439		-2,439	492,372	a
COLLEGE DISTRICT					
#522	-2,147	11,601	9,454	2,691,263	a
HEALTH DISTRICT					
Eastside[b]	-1,758	12,419	10,661	290,405	4

TABLE 24 (continued)

PROPERTY TAX REVENUE IMPACT OF THE
TWO-YARD DIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
HOSPITAL DISTRICT					
Centreville	-2,020	23,086	21,066	320,411	7
SANITARY DISTRICT					
Metro East[b]	$-5,791	$ 25,032	$ 19,241	$ 510,692	4
FIRE DISTRICT					
Cahokia	-928	--	-928	95,273	a
Village of Brooklyn	-11	--	-11	3,686	a
Camp Jackson	-580	16,114	15,534	32,138	48
Church Road	-23	786	763	11,954	6
State Park	-28	--	-28	25,212	a
Dupo	-476	--	-476	46,239	1
PARK DISTRICTS					
City of East St. Louis	-794	517	-277	219,101	a
Stites	-906	3,443	2,537	19,985	13
TOTAL	-92,708	814,159	721,451	29,547,606	2.4

Notes: "--" denotes that the district's taxes are not affected
"a" denotes a change of less than 1.0 percent.
"b" denotes districts that overlap with Madison County. Revenue changes in both counties are reported on the St. Clair County tables.

Source: SEK, 1980

TABLE 25

PROPERTY TAX REVENUE IMPACT OF THE
THREE-YARD DIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
COUNTY GENERAL	$-1,910	$ 13,742	$ 11,832	$ 917,502	1
COUNTY OTHER	-9,863	58,474	48,611	6,818,011	a
TOWNSHIP					
Stites	-2,567	36,747	34,180	63,162	54
Canteen	-2,808	99	-2,709	133,369	-2
East St. Louis	-287	6,542	6,255	326,902	2
Centreville	-3,073	27,663	24,590	410,155	6
Sugar Loaf	-457	--	-457	95,978	a
ROAD AND BRIDGE					
Canteen	-220	--	-220	57,190	a
Centreville	-1,347	12,137	10,790	180,003	6
Sugar Loaf	-330	--	-330	69,400	a
CITY					
Village of Sauget	-109	--	-109	974,195	a
Village of Brooklyn	-146	36,182	36,036	55,344	65
Village of National City	-144	5,660	5,516	12,233	45
City of East St. Louis	-1,189	63,690	62,501	2,983,132	2
City of Centreville	-4,180	102,575	98,395	231,522	42
Village of Alorton	-664	76	-588	90,892	a
Village of Cahokia	-7,646	--	-7,646	762,548	1
Village of Washington Park	-198	--	-198	126,677	a
Village of Dupo	-400	--	-400	30,778	a
SCHOOL DISTRICT					
Unit 189	-16,969	266,881	249,912	4,107,435	6
Unit 188	-4,466	169,285	164,819	115,985	142
Unit 187	-21,714	207,117	185,403	2,317,011	8
Unit 10[b]	-298	--	-298	3,909,451	a
Unit 196	-2,439	--	-2,439	492,372	a
COLLEGE DISTRICT					
#522	-2,041	11,271	9,230	2,691,263	a
HEALTH DISTRICT					
Eastside[b]	-1,847	19,016	17,169	290,405	6

TABLE 25 (continued)

PROPERTY TAX REVENUE IMPACT OF THE
THREE-YARD DIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
HOSPITAL DISTRICT					
Centreville	-2,198	23,086	20,888	320,411	7
SANITARY DISTRICT					
Metro East[b]	$-5,376	$ 39,778	$ 34,402	$ 510,692	7
FIRE DISTRICT					
Cahokia	-928	--	-928	95,273	a
Village of Brooklyn	-11	--	-11	3,686	a
Camp Jackson	-728	16,196	15,468	32,138	48
Church Road	-32	784	752	11,954	6
State Park	-28	--	-28	25,212	1
Dupo	-476	--	-476	46,239	1
PARK DISTRICTS					
City of East St. Louis	-803	2,621	1,818	219,101	a
Stites	-906	12,912	12,006	19,985	60
TOTAL	-98,798	1,096,352	997,554	29,547,606	3.4

Notes: "--" denotes that the district's taxes are not affected
"a" denotes a change of less than 1.0 percent.
"b" denotes districts that overlap with Madison County. Revenue changes in both counties are reported on the St. Clair County tables.

Source: SEK, 1980

TABLE 26

PROPERTY TAX REVENUE IMPACT OF THE
THREE-YARD BIDIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
COUNTY GENERAL	$-1,770	$ 13,907	$ 12,137	$ 917,502	1
COUNTY OTHER	-10,360	105,252	94,892	6,818,011	1
TOWNSHIP					
Stites	-2,578	37,824	35,246	63,162	56
Canteen	-335	99	-236	133,369	a
East St. Louis	-156	676	520	326,902	a
Centreville	-2,536	27,680	25,144	410,155	6
Sugar Loaf	-457	--	-457	95,978	a
ROAD AND BRIDGE					
Canteen	-142	--	-142	57,190	a
Centreville	-1,103	12,137	11,034	180,003	6
Sugar Loaf	-330	--	-330	69,400	a
CITY					
Village of Sauget	-109	--	-109	974,195	a
Village of Brooklyn	-146	37,524	37,378	55,344	68
Village of National City	-145	6,810	6,665	12,233	54
City of East St. Louis	-621	64,933	64,312	2,983,132	2
City of Centreville	-2,725	87,179	84,454	231,522	36
Village of Alorton	-664	76	-588	90,892	a
Village of Cahokia	-7,646	--	-7,646	762,548	-1
Village of Washington Park	--	--	--	126,677	0
Village of Dupo	-400	--	-400	30,778	1
SCHOOL DISTRICT					
Unit 189	-14,378	139,272	124,894	4,107,435	3
Unit 188	-4,466	173,511	169,045	115,985	146
Unit 187	-17,882	207,117	189,235	2,317,011	8
Unit 10[b]	-4,870	--	-4,870	3,909,451	a
Unit 196	-2,439	--	-2,439	492,372	a
COLLEGE DISTRICT					
#522	-2,456	11,900	9,444	2,691,263	a
HEALTH DISTRICT					
Eastside[b]	-1,654	19,261	17,607	290,405	6

TABLE 26 (continued)

PROPERTY TAX REVENUE IMPACT OF THE
THREE-YARD BIDIRECTIONAL PLAN ON ST. CLAIR COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
HOSPITAL DISTRICT					
Centreville	-2,007	23,086	21,079	320,411	7
SANITARY DISTRICT					
Metro East[b]	$-5,861	$ 38,129	$ 32,268	$ 510,692	6
FIRE DISTRICT					
Cahokia	-928	--	-928	95,273	a
Village of Brooklyn	-11	--	-11	3,686	a
Camp Jackson	-437	13,696	13,259	32,138	41
Church Road	--	786	786	11,954	7
State Park	-254	--	-254	25,212	1
Dupo	-476	--	-476	46,239	1
PARK DISTRICTS					
City of East St. Louis	-435	2,671	2,236	219,101	1
Stites	-906	13,286	12,380	19,985	62
TOTAL	-91,683	1,036,812	945,129	29,547,606	3

Notes: "--" denotes that the district's taxes are not affected
"a" denotes a change of less than 1.0 percent.
"b" denotes districts that overlap with Madison County. Revenue changes in both counties are reported on the St. Clair County tables.

Source: SEK, 1980

TABLE 27

PROPERTY TAX REVENUE IMPACT OF THE
TWO-YARD DIRECTIONAL PLAN ON MADISON COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
COUNTY	$ -3,981	$ 79	$ -3,902	$6,771,576	a
TOWNSHIP					
Venice	-1,503	37	-1,466	103,809	-1.4
Granite City	-906	-6	-912	451,574	a
ROAD & BRIDGE					
Venice	-999	46	-953	31,496	-3
CITY					
Venice Corp.	-5,561	934	-4,627	274,899	-2
Madison Corp.	-887	129	-758	192,924	a
Granite City Corp.	-3,978	-6	-3,984	1,991,391	a
SCHOOL DISTRICT					
#3	-12,469	-5,013	-17,482	447,872	-4
#9	-10,239	-1,635	-11,874	5,663,300	a
#12	-62	552	490	390,756	a
PARK DISTRICT					
Venice	-743	-773	-1,516	37,182	-2
Granite City Park	-698	--	-698	311,712	a
TOTAL	-42,026	-5,656	-47,682	16,668,491	a

Note: "a" means a percent change less than 1.0.

Source: SEK, 1980

TABLE 28

PROPERTY TAX REVENUE IMPACT OF THE
THREE-YARD DIRECTIONAL PLAN AND THREE-YARD BIDIRECTIONAL PLAN
ON MADISON COUNTY TAXING DISTRICTS

	CHANGE IN REVENUE FROM PROPERTY CHANGES	CHANGE IN REVENUE FROM TRACK CHANGES	TOTAL CHANGE IN REVENUE	TOTAL REVENUE COLLECTED	CHANGE IN REVENUE AS PERCENT OF TOTAL
COUNTY*	$ -4,420	$ 79	$ -4,341	$6,771,576	a
TOWNSHIP					
Venice	-1,466	37	-1,429	103,809	-1.4
Granite City	-906	-6	-912	451,574	a
Collinsville*	-86	--	-86	7,049	-1.2*
ROAD & BRIDGE					
Venice	-988	46	-942	31,496	-3
Collinsville*	-167	--	-167	144,193	a
CITY					
Venice Corp.	-5,901	934	-4,967	274,899	-2
Madison Corp.	-887	129	-758	192,924	a
Granite City Corp.	-3,978	-6	-3,984	1,991,391	-4
SCHOOL DISTRICT					
#3	-12,120	-5,013	-17,133	447,872	-3
#9	-10,239	-1,635	-11,874	5,663,300	a
#12	-62	552	490	390,756	a
PARK DISTRICT					
Venice	-719	-773	-1,492	37,182	-4
Granite City Park	-698	--	-698	311,712	a
TOTAL	-42,637	-5,656	-48,293	16,819,733	a

Note: "a" means a percent change less than 1.0.

* One of the grade separations is warranted under the Bidirectional plan, but not under the Three-Yard Directional plan. For the Three-Yard Directional plan, the CHANGE IN REVENUE FROM PROPERTY CHANGES should be reduced as follows: County - $479, Collinsville Township - $85, Collinsville Road and Bridge - $166.

Source: SEK, 1980

The project's impact on McKinley Bridge truck traffic would be minimal. Approximately 16 trucks involved in TOFC work that used the McKinley Bridge daily in 1979 are expected to begin using the Poplar Street Bridge once the common TOFC Yard is constructed. CONSAD's 2000 estimate is 33 trucks per day. At a maximum toll of $.90 per truck per day, the loss of truck toll revenues for one year (270 working days) would be $8,019.

Most cities received some intergovernmental transfers based on population. The project's impact on this type of revenue cannot be calculated precisely since sources of such funds are numerous and change over time. An estimate of the order-of-magnitude of this impact is calculated for Centreville, where the largest residential dislocation is expected to occur. Centreville receives intergovernmental transfers of $90 per resident in categories in which some or all funds are disbursed on a per capita basis. At this rate, the city revenues would decline by $24,000 (two percent of total revenue) if all residents displaced by the Three-Yard Bidirectional Alternative move out of Centreville. Revenues would decline by $33,000 (three percent of total 1979 revenues) if everyone displaced by either the Two-Yard or the Three-Yard Directional plans relocated outside the city. This outcome is considered unlikely. The impact of a population reduction on city costs is not known.

LAND USE

Although the proposed project lies within the SMSA, its primary effects would be localized in the Illinois portion. The study area, which includes parts of Madison and St. Clair Counties, is essentially an urban fringe with some urban concentrations, in particular - East St. Louis. Substantial blight has occurred in the study area and, while the SMSA still functions as a major retail center, sales levels have fallen in Central Business Districts on the east side.

Area land use patterns (see Exhibit H in Volume I of the EIS) have been influenced by three major factors: the Mississippi River, the rail corridors, and highways. The Mississippi River forms the western boundary of the project area and has acted as a natural magnet for industries desiring easy access to its navigable waters. The area's land use has also been influenced to a lesser degree by various features related to the River. Among these are levees, drainage canals, marshes, and lakes. Except for Horseshoe Lake, these features have served to direct land use change on a site-by-site basis rather than for the area as a whole. Horseshoe Lake is part of a 2,073 acre State Recreation Area. Because of its size, Horseshoe Lake serves as an effective barrier, separating development in the Granite City-Madison area from development in East St. Louis, National City, and Fairmont City.

Rail corridor locations, while exerting a major influence of their own, have themselves been influenced by the River. The majority of rail concentrations are located along the River from Madison south to Sauget. The bulk of these yards, occupying approximately 1,500 riverfront acres, are currently underutilized. Rail lines fan out in all directions from this central area, as the River's floodplain provides flat land conducive to easy rail movement and suitable for industrial development. It is along these corridors that most industrial development has taken place. Further, many residential and commercial areas are influenced by the layout of the rail system. In fact, in many parts of the area, rail corridors have roughly established the limits of residential development.

Highway corridors are similar to rail in that they are concentrated in a single area near the river and then fan out as one moves east. This radial pattern provides good access to the riverfront, but fails to provide for north-south movement parallel to the river. The juxtaposition of the rail and road networks results in numerous rail/highway conflicts.

Land use patterns established during the early part of the century were associated with the development of transportation and the beginnings of an industrial and mining based economy. During the second quarter of the century, population and industrial growth began to slow and established communities to experience decentralization. Prior to 1950, residential land use was confined within municipal boundaries, and commercial activities were located primarily in Central Business Districts (CDB's). Industrial uses were concentrated close to transportation facilities.

Since 1950 the most apparent type of development has been the rapid expansion of residential and commercial uses into areas formerly occupied by agricultural and other rural uses. The dispersal of urban functions away from established urban cores represented an acceleration of the decentralization process. This process can be associated with improved highways and the utilities accompanying them. Commercial activities have also expanded to outlying areas, following the residential development and taking advantage of cheaper land and plentiful parking space.

Despite the expansion of urban land uses, the dominant use in the study area is still agricultural with over half of the acreage falling within this category. The second largest category is pasture or inactive mine and the next is developed, i.e. residential, industrial, and commercial.

Project Effects:

The proposed rail restructuring and riverfront redevelopment project is compatible with the land use goals and objectives of the planning agencies in the St. Louis area. It has been designated by the East-West Gateway Coordinating Council, the area's A-95 review agency, as a key

project to be accomplished in the 1980's. A list of groups who cite rail restructuring as a planning goal is provided in Table 29.

The project also fits well with the three federal goals for urban areas, as stated in the National Urban Policy. These goals may be summarized as follows:

1. The conservation and improvement of existing communities by correcting or modifying conditions of distress, blight or decline;

2. Increasing housing and employment opportunities and choice for the poor, minorities and disadvantaged; and

3. The promotion of orderly and efficient growth and development which prevent future conditions of distress and conserve existing communities.

The differential land use impacts of the three alternatives, are summarized in Table 30. The table gives the number of acres in each land use category to be converted to rail yard use. Most of the affected acreage already contains rail yards and lines (over 50 percent for all plans). Agricultural and vacant land also account for a major portion of the total (over 30 percent). Of the industrial acreage (less than 4 percent) affected, over half contains vacant structures only. (The residential, commercial, and industrial relocations required are addressed in Section I of this report. See "Natural Environment" in Chapter III of the Environmental Impact Statement for a more detailed discussion of the affected ecological habitats. These areas are depicted in Exhibit E of that document.)

In addition to the impacts detailed in Table 30, the project will affect land use along the Mississippi River. Approximately 1,500 acres presently containing underutilized rail yards would be cleared by the MARGE project. Although the process would most likely be staged, clearing this large area creates the potential for redevelopment of the area. With the construction of the common Trailer-on-Flatcar (TOFC) facility at the eastern edge of the study area, the railroads which conduct TOFC operations on the riverfront can relocate them fairly early in the project, freeing the area adjacent to the Eads Bridge.

TABLE 29

GROUPS WHICH CITE RAIL RESTRUCTURING
AS A BENEFICIAL PLANNING GOAL

1. Illinois Capital Development Board, in "The East St. Louis Area: An Overview of State Capital Projects and Policies," July 1977

2. Consortium of Vocational Educators and Employers, Southwestern Illinois Metropolitan and Regional Planning Commission in "Economic Profile of the Southwestern Illinois Region," Corsortium of Vocational Educators and Employers

3. St. Clair County Overall Economic Development Program Committee, in "Overall Economic Development Program Update 1979-1980" June 1979

4. Southwestern Illinois Metropolitan and Regional Planning Commission

5. East-West Gateway Coordinating Council

6. Office of the Mayor, East St. Louis

7. Office of the Mayor, Centreville

8. National Stockyards Company

9. Office of the Mayor, National City

10. Transportation Study Commission, Illinois General Assembly

11. Economic Development Commission, Illinois General Assembly

12. Regional Commerce and Growth Association, St. Louis, Missouri

TABLE 30

LAND USE [1]
(acres)

LAND USE CATEGORY	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE	ADMUSTMENTS FOR ROUTE 3 ALTERNATIVES
Residential	49	55	40	(0) [0]
Commercial	29	41	40	(0) [0]
Industrial	7	28 [2]	28 [2]	(-4) [0]
Public	0	2	2	(+1) [0]
Agricultural	186	242	244	(-10) [-7]
Existing Rail Facilities	868	920	905	(+14) [+68]
Vacant	302	389	353	(-3) [0]
TOTAL	1,439 [3]	1,677 [3]	1,612 [3]	(-2) [+61]

1 These figures are based on 175 ft. right-of-way for both the four-lane and two-lane designs.

2 Vacant meat processing facilities cover 12 of these acres.

3 These numbers will not match the totals shown on Table 8, since land use categories do not match habitat categories, and since this table includes items other than the habitat areas included in Table 8.

Note: Acreages based on eastern alignment of Route 3. For western alignment, add the number in parentheses to the preceding number. For the central alignment add the number in brackets to the base number.

Source: SEK, 1980

The current land use on the riverfront is predominantly industrial or rail-related, with the exception of a small enclave of residential use, and several commercial operations. New development following the clearance of rail facilities would have to take these into account by assimilating or relocating them. Since the area occupied by these uses is limited, providing for them does not pose a problem.

The location of the area directly opposite the Gateway Arch and the LaClede's Landing development in St. Louis broadens its potential for a variety of uses. Recreational development would enhance access to the river for both visitors and local residents. Commercial uses might focus on hotel development with associated shops and entertainment. The construction of office buildings provides another possibility, and the devotion of some acreage to residential use would have a positive impact on both the economy and the image of the Metro East. A proposal has been advanced for the expansion of the Jefferson National Expansion Memorial to include a portion of the riverfront on the Illinois shore, but no firm action has been taken. In short, the possibilities are almost unlimited.

TRANSPORTATION

St. Louis' early position as a transportation center shaped the City's economic development, following a typical pattern: good transportation attracts trade establishments which, in turn, attract manufacturing plants. This pattern continues to be reflected in the City's current economic structure. The manufacturing, transportation, communications and utilities, and wholesale trade sectors of the St. Louis economy are relatively strong compared with the overall U.S. economic structure.

The transportation sector of the St. Louis SMSA consists of air, water, rail and highway modes. St. Louis' Lambert International Airport provides major air carrier service, while a number of smaller local airports, including Bi-State Parks Airport in Cahokia, Illinois, serve general aviation needs. The Mississippi River is a major water thoroughfare with heavy barge traffic and lighter pleasure use. It is patrolled and regulated by the United States Coast Guard.

The study area also supports an extensive highway network, being the converging point of four major interstate expressways, I-70, I-55, I-64 and I-40. Local motor vehicle access within the study area is provided by numerous state and county highways, including Illinois Route 3 which may be relocated as part of the MARGE project. In addition, the Illinois Department of Transportation is in the process of completing a circumferential ring around the periphery of the SMSA, to expedite the flow of through traffic. Finally, the railroad component is one of the area's most pervasive transportation elements, with thirteen Class I railroads operating into or through the St. Louis rail terminal.

Transportation has historically been a major influence in the study area and the railroad industry, in particular, plays two important roles in the St. Louis economy as a key component of the local transportation sphere. It provides community infrastructure and it is a local industry generating jobs and local business. It should be noted that in the SMSA railroad workers account for 22 percent of local transportation employment.

In addition to its role as a part of the infrastructure, transportation constitutes an important local industry employing 4.5 percent of the St. Louis SMSA non-agricultural work force in 1978. Approximately 78 per cents of the annual inputs purchased by the rail industry are acquired within the local area. Because this proportion of local purchases is relatively high, changes in the size of the transportation industry induce relatively large secondary changes in the local economy. While purchasing many of its resources locally, the industry sells a substantial portion of its services outside the SMSA, producing 12 percent of the area's basic income in 1972. Finally, the industry pays wages which are above the SMSA average.

Transportation Services:

Residents' transportation needs in the St. Louis SMSA are mainly met through the use of the automobile (Table 31). At the same time, over seven percent of the workers in the SMSA use the bus to get to work. Madison County and St. Clair County in Illinois have a lesser dependency on the bus for their journey to work. However, at the subcounty level, some communities exhibit a strong dependency on buses for transport. For example, over ten percent of the workers living in Venice, East St. Louis, and Alorton use the bus to get to and from work. While Centreville bus ridership approaches that of the SMSA, census tract 5028 (a project-affected part of Centreville) has 13 percent worker ridership on buses.

Brooklyn, National City, and Madison City do not follow the journey to work pattern exhibited by other places in the study area. A large share of the residents of these towns walk to work.

Journey to other activities can be assessed by looking at car ownership, or the lack thereof. Table 32 shows a wide range of values for lack of car ownership. Of significance is the high percentage of non-owners in Venice, Brooklyn, National City, East St. Louis, and Alorton. Centreville has about ten percent more car non-owners than the SMSA.

TABLE 31

JOURNEY TO WORK
(1970)

Place	Number of Workers	Walk (%)	Bus (%)	Car (%)
St. Louis SMSA	883,200	4.8	7.5	83.5
Madison County	91,363	5.0	2.0	87.0
Madison City	2,881	15.9	6.6	73.9
Venice	1,401	8.0	11.0	78.0
St. Clair County	99,749	2.0	5.6	84.2
Brooklyn	451	27.0	7.0	63.0
National City	33	61.0	0.0	39.0
East St. Louis	18,825	5.7	13.5	74.4
Alorton	814	3.8	18.3	75.3
Centreville City	3,107	4.0	7.8	74.0
Centreville Township	12,804	3.3	6.2	87.1
Centreville:				
-Census tract 5028	874	7.0	13.0	58.0

Source: U.S. Bureau of the Census

TABLE 32
FAMILIES NOT OWNING AN AUTOMOBILE
(1970)

Place	Percent
St. Louis SMSA	18.0
Madison County	12.0
Madison City	24.1
Venice	32.3
St. Clair County	19.2
Brooklyn	52.2
National City	31.0
East St. Louis	43.9
Alorton	37.3
Centreville City	28.1
Centreville Township	14.0
Centreville:	
- Census tract 5028	28.0

Source: U.S. Bureau of the Census

Table 33 shows that bus ridership levels in Illinois are significantly lower than those for Missouri. However, at a local level in the study area this is not the case, see Table 34. Bus route number 3706 has rider-to-population ratios nearly double those for the Missouri portion of the SMSA and nearly quadruple the ratio for Illinois. Clearly, residents of portions of the study area rely heavily on buses for transportation. (Ridership levels for the bus routes serving the Illinois portion of the St. Louis SMSA are given in Appendix F.)

Along with a dependency on bus transportation, residents of portions of the study area rely on their relatives, friends and neighbors who own cars to meet additional transportation needs. Naturally, some other residents walk to their destinations; however, this does not appear to go beyond a neighborhood distance (e.g., trips to a neighborhood church, neighborhood friends and relatives, and neighborhood stores).

Long - Term Impacts from Project Implementation:

The MARGE Project is expected to produce two types of impacts on the transportation system in the study area: Improved rail transit through the gateway; and improved automobile traffic patterns and access to local areas. The first reflects a major purpose of the project and would be enjoyed by all shippers using area rail facilities as well as the railroad companies themselves. The second impact relates to another project goal - the reduction of auto/rail conflicts - and would result from constructing rail/highway grade separations and from relocating Illinois Highway Route 3.

A rail traffic simulation study conducted by CONSAD Research Corporation calculated the reduction in rail car transit time. The results were used to quantify the benefits of shorter transit times, which consist of greater efficiency in the use of rail cars and savings to shippers in inventory carrying costs. They have projected that, in the year 2000, 2,975,400 cars will enter the gateway yards for switching. The dollar value of improved car utilization may be gauged by estimating the

TABLE 33

BI-STATE BUS RIDERSHIP COMPARISONS

Portion of SMSA	Riders/Population			Percent of Total Ridership			Population as a Percent of the Total Population (1980)
	Nov. 1979	May 1980	July 1980	Nov. 1979	May 1980	July 1980	
Illinois	.062	.063	.044	13.7	14.6	12.5	24.0
Missouri	.123	.117	.096	86.3	85.4	87.5	76.0

Source: Bi-State Development Corp., 1980.

TABLE 34

BUS RIDERSHIP IN THE CENTREVILLE RELOCATION AREA

Route Number	Average Daily Ridership			Percentage of Total Illinois Ridership			Riders/Population[1]		
	Nov. 1979	May 1980	July 1980	Nov. 1979	May 1980	July 1980	Nov. 1979	May 1980	July 1980
3502	515	512	502	1.5	1.5	2.0	--	--	--
3706[2]	4,628	4,627	3,282	13.8	13.7	13.2	.214	.214	.152
TOTAL	5,143	5,139	3,784	15.4	15.2	15.2	--	--	--

[1] Population for census tracts 5006, 5008, 5009, 5011, 5025, 5027, and 5028 is 21,644.
[2] Some buses equipped with wheelchair lifts.

Source: Bi-State Development Corp., 1980.

reduction in car hire expenditures. At the 1979 average car hire rate of $16.25, annual savings of $20-$34 million would result from the reductions in transit time anticipated from the various alternatives (see Table 35).

Each day that a rail car sits in a yard, the owner of the car's contents must also pay an inventory carrying charge. This charge is the value of the goods multiplied by one day's interest cost. The aggregate value of the daily interest charges incurred by shippers can be estimated from published data. First, the average value per carload is calculated for each commodity group. This information is obtained from Ralph D. Samuelson and Paul O. Roberts, A Commodity Attribute Data File for Use in Freight Transportation Studies, MIT Center for Transportation Studies, Report CTS 75-20, Nov., 1975 and from rail equipment specifications. Second, the St. Louis carload distribution for each commodity is approximated by the percentage distribution of commodities carried by rail in the nation. Since St. Louis is centrally located in the U.S., the distribution percentage is assumed to also represent the cargo shipped through St. Louis. These factors are used to obtain an estimated weighted average value per carload of $70,000.

Third, this value is multiplied by the daily interest rate to obtain the carrying charges incurred each year by shippers for each day their goods sit in the yards. This is the amount saved for each day by which transit time is reduced. At the current long-term treasury security rate of twelve percent, daily savings per carload are estimated to be $25. According to CONSAD, approximately 64 percent of the cars handled in the Gateway are loaded. Therefore, calculations of the potential savings to shippers in the year 2000 range from $20-$33 million.

Benefits to local communities of the second impact, improved traffic flow, were estimated by calculating the time saved by motorists currently stopping and slowing at railroad crossings. The methodology used in estimating the savings was taken from the US DOT's Procedure for Estimating Highway User Costs, Fuel Consumption and Air Pollution.

TABLE 35

ESTIMATED SAVINGS DUE TO IMPROVED RAIL PERFORMANCE

	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Time			
Reduction in Average Time in the Gateway[1] (hours)	10	13	17
Savings			
Annual Savings on Car Hire Expenditures at Year 2000 Projected Traffic Levels[2] (millions of 1980 dollars)	$20	$25	$34
Annual Savings on Inventory Carrying costs at Year 2000 Traffic Levels and a 12% Interest Rate (millions of 1980 dollars)	$20	$25	$34
Total Annual Savings at Year 2000 Projected Traffic Levels (millions of 1980 dollars)	$40	$50	$67

Notes:

1. Supplied by CONSAD Research Corporation.
2. 1980 Car Hire Rate is $16.25 per day.
3. 1980 Inventory Cayyring Cost for a loaded car is estimated to be $25 per day, from (1) Samuelson and Roberts, A Commodity Attribute Data File For Use in Freight Transportation Studies, MIT Center for Transportation Studies, Report CTS 75-20, Nov. 1975; (2) rail equipment specifications; and (3) Yearbook of Railroad Facts, Association of American Railroads, 1980. 64 % load factor supplied by CONSAD.

More details about the procedure are provided in the section on energy. It is estimated that the proposed grade separation structures will save motorists at least 11,506 vehicle days in the year 2000 (Table 36).

TABLE 36

DAYS SAVED AT GRADE CROSSINGS[1]
(Year 2000)

	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Days saved at yard crossings	2367	2367	2367
Days saved at optional corridor Crossings	9139	9139	9380
Total Days Saved	11506	11506	12803

Notes:
1. Data supplied by Illinois DOT, procedure derived from US DOT Procedure for Estimating Highway User Costs, Fuel Consumption and Air Pollution, Revised May, 1980.
2. Data for grade crossing #53 was not available.

Other aspects of local access would also be affected by several elements of the project. Qualitative benefits of eliminating selected at-grade crossings, relocating and upgrading Route 3 (Exhibits F-1 or F-2, and G in Volume I of the EIS show the proposed alignments), and restructuring the yards are summarized below by community.

Centreville. If residents are relocated within the city, they would be more centrally placed, and their access to the hospital, city hall, and major thoroughfares would be improved. More bus routes are located in the center of town and increased use of public transportation may take place if residents relocate within Centerville.

The addition of three proposed grade separations would improve general access, both internal and external, for residents of Centreville. Improved access to other parts of the St. Louis metropolitan area will be made possible by the new I-270 expressway (currently under construction and not part of this project). Although some school bus schedules and public bus routes would need changing (route #502 - Cahokia/Centreville), the proposed project would not cause any disruption in the two bus routes which have vehicles equipped with wheelchair lifts for handicapped

persons. Nor would it harm service to school children who are bused within the Centreville-Cahokia area. In fact, proposed grade separations would provide reduced trip lengths for some school buses and would reduce the potential for accidents between buses and trains.

National City. The relocation of the residential area of National City proposed under either Three-Yard Alternatives would consider its accessibility to police and fire protection and ambulance services. The new site should maintain, at a minimum, the present level of accessibility.

Access to the McKinley Bridge and the northern industrialized areas of the St. Louis metropolitan area would be improved by constructing the new Route 3. None of the proposed rerouting plans would pass as near as the current road to either the existing housing or the location chosen for a new residential area. It is, therefore, reasonable to assume that less traffic may be expected through the city than presently exists.

Brooklyn. Transportation impacts in Brooklyn will only occur as a part of the Route 3 plans. Rerouting Bend Road around Brooklyn will help reduce the amount of traffic which presently goes through the city. Also, relocated Bend Road will provide easy access to the east side of the Madison Yard since a grade separation is included with the plan.

Improved movement of traffic on Route 3 past Brooklyn will result, and Brooklyn residents would have excellent access to the realigned Route 3. Traffic past the school located on 4th Street at Route 3 would be reduced appreciably.

Venice. The Route 3 relocation would create a complete by-pass of the city which would result in less traffic through the center of Venice. Reduced noise, dust, traffic congestion, and vehicular pollution would result. At the same time, general access to Venice would be improved. A reduction in truck traffic could possibly occur in (and through) the Venice area as a result of consolidating TOFC activities in a new facility.

Short-Term Impacts from Project Construction:

It is expected that construction activities will cause some disruptions to local traffic patterns. Temporary street closings and traffic reroutings will inevitably accompany the building of the grade

separations and the relocation of Route 3. Further, the presence of construction machinery in the traffic mix will create congestion, and heavy trucks transporting materials to and from construction sites will increase traffic volume, noise and dust.

Construction noise problems in the rail yards would most likely be mitigated by the early construction of the absorptive barriers to be included as a feature of yard restructuring. These barriers would help reduce noise associated with the construction of grade separations necessitated by yard expansions, however, in the case of the optional grade separation structures along rail corridors, the only feasible method for addressing noise pollution is modification of construction vehicles. Trucks would have adequate mufflers and construction activity would be confined to normal working hours.

Inconveniences attributable to street closings and reroutings can only be addressed by making sure that sufficient warning has been given so that residents can modify their travel patterns. Local officials and law enforcement agencies will be notified and involved in planning community responses to construction generated traffice disruptions. In this way, it is hoped that negative impacts of construction can be minimized.

PUBLIC SERVICES

Public Services are generally considered to include emergency services such as police, fire and ambulance, hospitals, sanitation and sewage. While some of the communities in the project area have, at present, a reasonable level of access to all such services, others experience difficulties associated with delays at railroad crossings. The maintenance of an acceptable level of access both during and after the construction of the restructured and relocated facilities is of major importance to the residents of all affected communities. In the long term, public services would be affected in two ways: 1) a sewage treatment plant will be relocated, and 2) reduction in rail/highway conflicts should improve the provision of emergency services in many communities. In the short term, traffic disruptions during the construction phase of the project may cause negative impacts on public services as temporary street closings force emergency vehicles to use different and perhaps circuitous routes.

Relocation of Sewage Treatment Plant:

The New Yard will displace the Lansdowne Sewage Treatment Plant, which has a design average daily flow of 6.0 mgd. The plant serves Brooklyn, Caseyville, Fairmont City, Madison, National City, Venice, Washington Park, the unicorporated areas of Stites and Canteen townships, and parts of the unincorporated areas in Venice and Nameoki townships. Major industrial users include St. Louis National Stockyards Company, Swift Fresh Meats Company, and Diamond Plating Company. Built in 1964, it is operated by the East Side Levee and Sanitary District and is manned by five operators and a chief. The plant provides only primary treatment and is, therefore, not in compliance with the National Pollution Discharge Elimination System permits. Future use of this facility is, therefore, uncertain.

A 1971 regional study suggested that several sewage treatment plants, including the Lansdowne Plant, be replaced by a new regional plant. In

1976 a second study evaluated the cost effectiveness of 15 regional plans.[1] The recommended plan involved converting the Lansdowne plant into a pumping station and treating the Lansdowne area sewage at Granite City. The Granite City plant, which was under construction at that time, provides primary and secondary treatment and was expected to have sufficient excess capacity to handle the Lansdowne sewage. This plan has not been implemented.

Elimination of At-Grade Rail/Highway Crossings:

Constructing grade separation structures is expected to enhance the provision of emergency services throughout the area. The East St. Louis Railroad-Highway Conflict Demonstration Project "Before Study" describes current problems generated by at-grade crossings in East St. Louis. The following paragraph is the study's summary of the 13 comments received from Hospitals, Police, Fire and Ambulance Services in February 1977.

> "As indicated by the comments, the functioning of these vital public services is seriously curtailed by trains blocking grade crossings. Crimes are committed and houses, businesses and lives are lost because those who would prevent it cannot reach the site in time, stopped by a train blocking a grade crossing."

Such conditions prevail throughout the area and similar views were expressed by the city planner for Centreville. He believes the construction of overpasses at Mousette, Belleview, and Highway 157 will improve the provision of public emergency services in Centreville. Officials at the National Stockyards Company expressed the opinion that relocating the National City housing closer to the police station would enhance its public service level.

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1 Metcalf and Eddy, Inc., Facilities Plan and Environmental Assessment, May 1976.

Short-Term Impacts Resulting from Construction:

As described in the TRANSPORTATION chapter, there would undoubtedly be street closings and traffic reroutings during the construction of the grade separations, which would affect the provision of emergency services. The only remedies for this negative impact appear to be the notification of service operators as to the dates and durations of these disruptions and their involvement in planning alternative routes.

PUBLIC SAFETY

Improvement in public safety is of utmost importance in all modes of transportation--this is especially true in railroad operation and maintenance. Safety concerns in the project area are associated with the possibility of accidents during rail yard or corridor operations or with the risk of collisions between trains and motor vehicles at rail grade crossings. In the implementation of the project, particular attention would be paid to the leading cause of rail corridor accidents - failure of track, roadbed and structure. Concerns about the handling of chemical spills and explosions would be addressed by the project in a number of ways, and constructing grade separations at appropriate locations would reduce the incidence of train/motor vehicle accidents.

Railroad Operation:

Many resources have been expended on research and development to create safer rolling stock and stronger track structure. These innovations will be incorporated in the design of the restructured rail facilities in the St. Louis Gateway area to provide the safest railroad operations possible. A number of measures have been proposed for inclusion in the design, operation and maintenance of the proposed restructured facilities to reduce the likelihood of accident:

- Stronger and Better Maintained Track Structures. The leading cause of railroad accidents is "Track, Roadbed, and Structures." According to the Federal Railroad Administration's Annual Accident Bulletin, Summary and Analysis of Accidents on Railroads in the United States, 42 percent of all accidents were attributed to this cause in 1979[2]. The restructured facilities in the St. Louis Gateway area, using the latest in new construction and track design, will virtually eliminate accidents due to this cause. The standard of most of the track now in use is the very lowest; all track in the restructured program will be renovated to the highest standard. This will be accomplished by installing 132-pound continuous welded rail on all main line corridors, thus eliminating rail joints--the most prevalent point of track structure failure. Also, a stronger tie structure consisting of all new ties on main line corridors will be installed. Better ballast and drainage conditions will also be provided.

- Improved Track Maintenance. A higher state of track maintenance will be programmed using the latest laser-controlled track surfacing and alignment equipment.

- Bridges. Improved bridge structures, capable of handling today's heavier locomotives and cars would also enhance safety.

- Improved Signal System - CTC. The installation of an improved signal system would safely and expeditiously move main line trains. Such a system could be computer assisted to enhance the monitoring of all safety features.

- Improved Communication Systems. A communication system using radio, microwave, and fiber optics would provide reliable communication between train control forces and train engineers and conductors, further enhancing safety.

- Monitoring Equipment. Electronic monitoring equipment is invaluable for warning of impending equipment failure. Overheated journal detectors and over-sized load detectors would be installed at locations throughout the Gateway to prohibit accidents due to such causes. Speed monitoring devices would to insure compliance with design speed, eliminating accidents due to excessive speeds (4 percent of all 1979 accidents).

- Fencing. Fencing would substantially reduce vandalism, thus improving safety. Two percent of the 1979 accidents were caused by vandalism.

Safety in railroad operation is enhanced by either reducing the likelihood of an accident or by minimizing the consequences of any accidents that do occur. Currently, the responsibility for handling accidents in rail yards and on corridors rests with the community fire protection district in which the incident occurs. The absence of emergency facilities within the immediate vicinity increases the risk associated with such accidents and the severity of the damage which could be expected. Below are several measures that would help to mitigate the consequences, should an accident occur:

- A fire station would be provided at each major yard. The chief at these locations would be a person well trained in handling railroad-type accidents. He would act as the

public safety coordinator between the railroads and the communities. In addition, the coordinator would conduct training classes for local fire and accident forces and would establish school programs on railroad safety.

- Coordination would be maintained between railroad accident prevention personnel and all disaster contingency planning agencies in the Gateway area.

Rail/Auto Conflict:

The optional construction of nine grade separation structures at rail/highway crossings should reduce the incidence of train-motor vehicle accidents. Table 37 lists the savings in expected accident frequency for each crossing under each restructuring alternative. Expected accident frequencies, which were calculated according to federal guidelines, take into account the number of vehicles per day, number of trains per day, type of existing crossing protection, and the crossing's setting (urban or rural). A reduction of 0.10 in the expected accident frequency means that in an average ten year period, one less accident will occur at the crossing. Construction of structures warranted under the various plans would prevent 13-14 accidents over a 30 year period (Table 38).

TABLE 37

SAVINGS IN EXPECTED ACCIDENT FREQUENCY

OVER THE NO BUILD CASE

(Year 2000)

Corridor Crossings #	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
3	.05	.05	.05
18	.03	.03	.03
19	--	--	.02
24	.01	.01	--
43	.03	.03	.03
44	.05	.05	.05
45	.02	.02	.02
46	.17	.17	.17
47	.02	.02	.02
52	.02	.02	.02
Subtotal	.40	.40	.41
Yard Crossings	.02	.02	.06
Grand Total	.42	.42	.47

TABLE 38

ESTIMATED EFFECT OF SEPARATION STRUCTURES ON SAFETY[1]

(30-year period)

	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Accidents Prevented	13	13	14

[1] Computed by multiplying annual accident frequencies above by 30.

RECREATION

Parks and recreational facilities are normally considered to be those open spaces that are formally developed. These improvements vary in sophistication from those with swimming pools and gyms to those with only dirt baseball fields. The least developed areas are open space, which may or may not be available for recreation uses. Recreational space has become increasingly important in urban life and awareness of its necessity is rising.

The St. Louis metropolitan area contains numerous parks operated by city, county, state, and federal authorities. Several parks are located within the proposed project area in Madison and St. Clair Counties, including three state parks.

Although there is a great deal of vacant land in the study area, only a nominal portion exists in the form of recreational, green belts or public open spaces. The amount available for public use is far below the minimum levels considered by the National Recreation and Park Association to be required for healthy communities. A city the size of East St. should have 150 acres of neighborhood parks and 150 acres of district parks. It is deficient in neighborhood parks, with only 20 acres total. The City does contain sufficient district parks, but several are privately maintained.

Only three other communities in the St. Clair County part of the study area have local park facilities. Robin Stadium Park in Brooklyn features a basketball court, 2 baseball diamonds and a children's play area. It is the only park administered by the Stites Township Park District. Fairmont City has a 4-acre municipal park and Sauget has a 20-acre open area which has not been fully developed. The area's need for "metropolitan" parks, larger open areas at some distance from urban development, is fulfilled by the heavily-used Frank Holten State Park.

The Madison County portion of the study area is somewhat richer in park lands. State parks include a portion of Cahokia Mounds State Park and the entire expanse of the approximately 960 acre Horseshoe Lake State Recreation Area. There is also a nature trail which is classified as a regional park. Both of the municipalities included in the study area, Venice and Madison, have sufficient city parks. In addition, there is a neighborhood park of 6 acres administered by the county.

In sum, the St. Clair County portion of the study area appears to be deficient in local parks, both in East St. Louis and in the surrounding communities. Despite the fact that the study area is filled with abandoned property and vacant land, its recreational facilities do not provide a minimum level of usable open space for its population. The Southwest Illinois Regional Planning Commission, in 1972, inventoried and analyzed park acreage in the area and determined that it contained less than 15% of the park acreage required by minimum standards. Table 39 identifies the study area parks in both Madison and St. Clair Counties and their recreational activities. The project's primary recreation impact would occur in Venice's Lee Park, but the specific effects for each community are listed below:

Centreville - No public recreational facilities exist in the Centreville relocation area. Residents living in the relocation area presently use recreational facilities outside the immediate area. The proposed project, therefore, will have no direct impact on recreation facilities in Centreville. However, access to such recreational facilities as Frank H. Holten State Park in Centreville will be improved as a result of the proposed grade-separation structures.

National City - National City has no recreational facilities and no plans exist to develop a facility. Thus, no impacts are expected.

Brooklyn - One park exists in Brooklyn; no impact is foreseen under any alternative.

Venice - A rail interconnection will impact Lee Park, the only park in Venice. Lee Park covers 32 acres and contains ballfields, picnic areas, playground equipment and tennis and basketball courts. The project plans include

TABLE 39
PUBLIC PARKS AND RECREATION AREAS
IN THE MADISON AND ST. CLAIR COUNTY STUDY AREAS
(1979)

Place/Name	Location	Size (acres)	Playground (acres)	Play Area (acres)	Softball	Baseball	Basketball	Tennis Courts	Fishing	Swimming Pool	Ice Skating Rink	Picnic Shelter	Picnic Tables
Madison County													
Venice:													
Lee Park	Broadway & Klein St.	32.0	yes		2	1	1	3				1	many
Madison:													
City Park	12th & Washington	2.4						2					
City Park	3rd & Washington	2.4						2					
West Madison Recreation Center	7th & Lee	2.4	yes										
Neighborhood Park:													
County Park	111 Pevely Lane	6.0	1.5	4.5								1	6
Regional:													
Nature Trail (Pontoon Beach to LeClair Station)	Lake Drive	60.0		(Nature Trail)									
Horseshoe Lake S.P.	IL 162, I-70, State 203 and 111	959.6		(Partly Developed)					Yes				
St. Clair County													
Brooklyn:													
Robin Stadium Park	8th & Washington	13.0	yes				1						

TABLE 39 (continued)
PUBLIC PARKS AND RECREATION AREAS
IN THE MADISON AND ST. CLAIR COUNTY STUDY AREAS
(1979)

Place/Name	Location	Size (acres)	Playground (acres)	Play Area (acres)	Softball	Baseball	Basketball	Tennis Courts	Fishing	Swimming Pool	Ice Skating Rink	Picnic Shelter	Picnic Tables
Cahokia:													
Cahokia Park	90 Cahokia Park Drive	6.0	1	54					5 (lake)	1	1	1	10
East St. Louis:													
19 parks		182.5	7.7	9.7	9	13	1	7		2		6	92
Sauget:													
Valley Park	Monsanto & Little Street	36.0		(Undeveloped)									
Regional:													
Cahokia Mounds S.P.	Route 40 & Black Lane	776.4	yes	(Museum and Archaeological sites)									
Frank H. Holten S.P.	Lake Drive IL 157	1,123.0	yes	(Lakes and trails)					Yes				
St. Louis City:													
Jefferson National Expansion Memorial	11 North 4th	91.0		(Visitor Center, Museum, Gateway Arch)									

Source: Recreation Lands and Facilities Inventory Update, East-West Gateway Coordinating Council, July 1979.

provisions for functional replacement. A 4(f) statement included in the EIS explains the impact in more detail, and discusses mitigation. While the Route 3 relocation will affect residential areas in Venice, no recreational facilities exist in these areas and no other park or recreation impacts are foreseen.

East St. Louis - The redevelopment of lands adjacent to the Mississippi River in East St. Louis would probably involve developing recreational resources. This could be a very positive improvement for the Metro-East area since it is short of recreational facilities.

The freeing of the land on the riverfront creates opportunities to increase recreational facilities for Metro East residents. A number of suggestions have been advanced by local planning agencies and the redevelopment study includes extensive consideration of recreational resources. The previously mentioned riveredge promenade proposed by the City of East St. Louis is a positive step in improving the recreational opportunities in the area.

COMMUNITY VALUES

The Community Involvement Program (CIP) of the MARGE project was established to identify and address issues which were of concern to the residents and elected officials of all the communities to be affected by the project. In addition to the railroad committees created to assure continuing involvement by the rail industry, the MARGE project organized three committees to obtain public input - the Public Agency Steering Committee (PASC), the Public Agency Technical Advisory Committee (PTAC), and the Citizens Advisory Committee (CAC). This last served as a vehicle for assessing community values within the affected muncipalities. A more detailed discussion of the MARGE CIP may be found in Appendix A of this report.

Community cohesion, or the integrity of neighborhoods, along with the safety of rail operations, and the availability of jobs, were the most important concerns expressed by the residents of the project impact area. Past experiences with relocation (from railroad and highway projects) have made citizens wary of additional rail-caused displacements. Residents have also voiced concern over the possibility of being dispersed to areas outside of their own communities as a result of rail restructuring.

Safety has been identified as a local concern since an unsafe place (through experience or perception) will not attract growth in population or industry. The possibility of accidents in rail yards and along corridors is a source worry for affected communities. Safeguards are included in the rail restructuring plan (see PUBLIC SAFETY) to help mitigate this concern.

Residents of the project area are also interested in potential employment resulting from rail restructuring. Restructuring is planned to improve transportation within and through the St. Louis gateway, which should make the area more attractive to new industries and result in increased employment. Additionally, although some rail and trucking industry jobs may be lost, the project will create temporary jobs in the construction sector.

Centreville:

Although Centreville residents anticipate some negative impacts from the project, they feel its overall effect will be positive. A strengthened local economy is the primary expected benefit, while they believe the negative impacts of displacement can be minimized by relocating households together, within Centreville. Citizens located in the neighborhoods which will be directly impacted by the proposed project exhibit a pattern of neighborhood cohesiveness. Neighbors know and interact with each other and the area appears to be quite stable. Many of the mobile homes that dot the neighborhood are used by members of a family (married sons or daughters, for example) who live in an adjacent housing unit. According to members of the Citizens Advisory Committee (CAC), areas adjacent to existing structures on city lots are frequently used to accommodate relatives who need a place to stay (usually in mobile homes).

Residents in the relocation area interact continually, helping each other and providing vital services to indigent neighbors. They therefore fear that they will be dispersed by project construction and that these ties would be disrupted. If relocation takes place, residents would like to see the neighborhood transplanted as a unit to another location in Centreville so that life can continue much as it does now. Negative experiences of some residents with past railroad acquisitions has generated a community-wide antipathy toward further relocations, and area citizens view the MARGE project with some skepticism.

There is also concern that the houses which remain after relocation will be isolated, with limited access to other parts of Centreville. It is further feared that property lines resulting from the anticipated diagonal pattern of land acquisition will be jagged and difficult to determine easily.

The safety of the nearby railroad operation is also a matter of concern. In addition to fears for personal safety the residents recognize the risk of accident as a deterrent to community development. Because of previous

problems in the Gateway Yard (notably a 1972 explosion) the community feels that adequate safeguards are needed against safety problems resulting from rail operations.

Centreville residents are also concerned about the effects of noise, vibration, and the general appearance of berms and fences. The magnitude of the impacts of these factors, it is felt, will determine the level of quality of life in the impacted neighborhoods and, thus, the quality of the neighborhoods as desirable residential and commercial/industrial areas within the City of Centreville. The citizens see the proposed rail project as a means by which their city can gain a more positive image and an opportunity for increased employment.

National City:

National City is unique in that all housing is owned by two corporations and rented to individuals. The residential area of National City is affected by the Three-Yard Directional and Bidirectional Plans. It is the desire of the owners of the housing stock to rebuild the housing in another part of the incorporated city and to continue to rent the housing to present residents, so that the community can remain intact.

Many of the existing structures are in need of repair (currently underway) and the existing vacant units could be rented if repair work were completed. The owners would like to complete the repairs and rent the additional units, but have held off until recently, because of the anticipated displacement by expected railroad improvements.

Brooklyn:

Community cohesion is important to these residents. If Route 3 were located west of the existing Q corridor tracks, it would minimize the effects on their neighborhoods. The eastern route locates the highway closer to the main residential area and displaces a residence and a business. Future economic viability is another concern of Brooklyn citizens, who view the rail relocation project as a vehicle by which long-term employment may be generated.

Venice:

The concerns of Venice residents mirror those expressed by Brooklyn. Their expectations for the MARGE project consist of neighborhood preservation and employment generation.

East St. Louis:

Since restructuring will not have the direct impacts in East St. Louis that it will have in the other communities, the concerns of East St. Louis residents center on the development which they expect to occur after the riverfront is cleared. Redevelopment of the riverfront area is seen as a catalyst that could potentially generate further improvements in other areas of the city. Efforts are currently underway by the City of East St. Louis, to organize and focus these concerns. Participation in the redevelopment study begun as a part of the MARGE project has lead local officials to consider applying for federal funding to construct a riveredge promenade as a first step in the development process. The impetus provided by an observable start can maintain the momentum needed to accomplish the long-term redevelopment of the riverfront. The diversity of uses possible for the area make it imperative that development take place in an orderly manner, guided by knowledgeable, experienced practicioners. The attraction of such individuals to the East St. Louis redevelopment effort should be one of the first steps in the process.

ENERGY CONSUMPTION AND SAVINGS

Energy savings for the three alternatives over the No-Build case will result from more efficient yard operations, a common TOFC yard, reduction in rail-auto conflicts, and from intermodal shifts. These savings are weighed against the energy consumed to build and maintain new facilities to obtain net energy savings.

Energy Savings:

Savings in the Yards -

The consolidated and expanded Madison and Gateway Yards and the New Yard will result in energy savings over the many private yards of the No-Build case because the proposed yards require fewer yard engine hours to move rail cars over the yard's hump, to pull cars around the yards, and to transfer cars between yards. Estimates of engine fuel use are based on CONSAD's cost analysis (Operational and Cost Analysis of Restructuring Alternatives for the St Louis - East St. Louis Railroad Network, pages 3.88 and 4.22). As shown in Table 40, expenditures on fuel are estimated to constitute 31% of train operational costs. Estimates of transportation costs anticipated under each alternative are given in row 1 of the table. The number of barrels of fuel saved in the Year 2000 with each of the build alternatives (over the No-Build case) is shown in row 6. Row 7 gives the savings over the life of the project, which has been estimated by CONSAD to be 50 years.

Fuel use is assumed to increase at the same rate that train traffic increases. CONSAD estimates this to be 3.06 % per year until the Year 2000; no change is projected after that date. Use of standard financial tables indicates that the savings realized from 1990 to 2040 are 49.5 times greater the savings realized in the Year 2000. (Note: the multiplier is less than 50 because savings realized in the ten years prior to the Year 2000 are less than those after the target year.)

TABLE 40
ENGINE FUEL USAGE[1]

	NO BUILD ALTERNATIVE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
1) Year 2000 Transportation Cost (thousands of 1979 dollars)	243,879	151,826	144,243	132,561
2) Year 2000 Train Operation Cost = 78% of Row 1 (thousands of 1979 dollars)	190,226	118,424	112,510	103,398
3) Year 2000 Fuel Cost = 31% of Row 2 (thousands of 1979 dollars)	58,970	36,711	34,878	32,053
4) Year 2000 Gallons of Fuel (at $.5653 1979 dollars per gallon)	104,316,292	64,940,739	61,698,213	56,700,867
5) Year 2000 Barrels of Fuel (42 gallons per barrel)	2,483,721	1,546,208	1,469,005	1,350,021
6) Year 2000 Barrels Saved (over the No-Build Alternative)		937,513	1,014,716	1,133,700
7) Barrels Saved Throughout the Project Life (over the No-Build Alternative) 1990-2040		46,406,894	50,228,442	56,118,150

[1]Data for rows 1-4 by CONSAD. Row 7 calculation is based on standard financial tables. A growth rate of 3.06 percent until the year 2000 is assumed.

The reduction in hours of engine operation also reduces the amount of energy required for engine maintenance. Data required to calculate this savings is unavailable (see U.S. DOT Energy Requirements for Transportation Systems, June 1980 page A101.

Savings from the Common TOFC Yard -

The TOFC yard, which is a part of each proposed alternative, will result in energy savings because fewer highway interchanges of truck trailers and containers will be made. At this time, all but five roads plan to use the common yard. The participating railroads would interchange 670 trailers and containers per day in the year 2000 according to CONSAD's projections of the number of trailers or containers used in the common yard.

The energy savings antipated in the common TOFC yard from not trucking the 670 units is equal to the average reduction in highway truck mileage multiplied by the energy consumed per mile. CONSAD has calculated that this amounts to 6628 miles per day. The fuel used is 0.0648 gallons per mile based on the assumption that a two-axle six-tire truck drays the trailers and containers and that the truck travels in moderate urban traffic and makes two stops along the way. The source of the fuel data is U.S. DOT Energy Requirements for Transportation Systems, 1980, Figure A-8 and Table 8.1.1.5-A. The calculation of fuel savings per day is shown in Table 41. Approximately 429 gallons (10 barrels) would be saved each day by having the trailer/container operations of interchanging carriers consolidated at one location.

Savings may again be calculated for a 50-year project life. CONSAD projects a 4.03 % rate of growth for TOFC traffic up to the Year 2000 and no change after that. Standard financial tables and formulas indicate that the 50-year fuel savings is therefore 49.1 time that of the Year 2000 savings. This calculation produces the savings shown in Row 6 of Table 41.

TABLE 41
TOFC YARD FUEL SAVINGS

		ALL ALTERNATIVES
1.	Reduction in daily highway truck miles[1] (year 2000)	6,628 miles/day
2.	Fuel consumed per mile by a 2-axle 6-tire truck[2]	0.045 gallons/mile
3.	Fuel consumed corrected for moderate urban traffic and two stops[3]	0.0648 gallons/mile
4.	Fuel savings per day from a common TOFC yard[4] (year 2000)	429 gallons/day
5.	Total fuel savings per year[5] (year 2000)	2,758 barrels/day
6.	Fuel saved over 50 year project life[6]	135,411 barrels/50 years

Notes: 1 -- Estimated by CONSAD for the year 2000 in: Operational and Cost Analysis of Restructuring Alternatives for the St. Louis-East St. Louis Railroad Network, Draft Final Report.

2 -- U.S. DOT Energy Requirements for Transportation Systems, 1980, Figure A-8

3 -- Ibid., Table 8.1.1.5-A.

4 -- Calculated by multiplying rows 1, and 3 above.

5 -- Calculated by multiplying row 4 by 270 working days per year and dividing by 42 gallons per barrel

6 -- See Text

Savings at Grade Crossings -

Gasoline savings were computed in three categories--energy savings from not slowing down, energy savings from not stopping, and energy savings from not waiting or idling. Energy consumed for slowing down or for stopping depended upon (1) the speed of the approaching vehicle and (2) the type of vehicle. The speed is the legal speed limit on the highway. Since the grade crossings have little truck traffic, only fuel consumption for passenger cars was used in the energy calculations. (A correction for the mix of vehicles, that is, percentage of vans, 4-cylinder cars, etc. was not made in the calculations. Such a correction would probably produce a small change in the total calculated energy savings per year.)

Figures on energy consumed to slow down and then accelerate to the initial speed on approaching the grade crossing and energy consumed to stop and accelerate were taken from Figure A.2 of U.S. DOT Procedure for Estimating Highway User Costs, Fuel Consumption and Air Pollution, 1980. Energy consumed to idle is based on the assumption that each auto on average waits 2 1/2 minutes for a train to pass. The auto uses 0.63 gallons per hour while idling, according to U.S. DOT Energy Requirements for Transportation Systems, 1980, Table 7.2.

The number of autos stopping and slowing was determined from auto and rail traffic provided by the Illinois DOT. IDOT projected average daily traffic at each grade crossing and the percent of time the crossing is blocked, which in turn depends on the number and length of trains. Average daily traffic times the percentage blocked time gives the number of vehicles stopped. Each auto stopped is also assumed to wait the average 2 1/2 minutes. All drivers not stopping are assumed to slow down and look for trains.

An energy savings calculation based on knowledge of the number of autos stopping (and waiting) or slowing, the auto's oncoming speed, and the gasoline consumed for a speed cycle change or for idling is

illustrated for a typical grade crossing (number 3) in Table 42. The savings calculated in the table times 365 gives the savings in energy at the grade crossing for the year 2000.

The savings in barrels of oil for all grade crossings for a 30-year period are shown for each alternative in Table 43. The calculation of savings over a 30-year period is based on a standard life assumed by the Illinois DOT for highway and bridge projects. Vehicular traffic is projected to increase 6% per year through this period, based on 1979 and 2000 traffic data. Gallons of fuel saved per year are divided by 42 to obtain barrels of oil saved per year.

Intermodal Shifts -

Additional energy savings may be generated if improved rail service attracts current truck users to the rails. Thorough analysis of intermodal shifts must begin with detailed models of individual shipper's behavior, which requires costly data processing and is beyond the scope of an EIS. An estimate of the order-of-magnitude of the intermodal shift can be obtained from published reports, however. Conventional wisdom indicates that truck transportation is four times as energy intensive as rail transportation and twice as intensive as TOFC movements.

A recent study by Roberts[1] analyzed traffic movements between Philadelphia and Cleveland. Once a satisfactory model of the current situation had been established, the impacts of several national policies on freight modal choice and fuel use were examined. The first policy considered was restructuring the Pittsburg rail yard. Roberts assumed modernization would reduce mean time in the yard by 2.25 days and reduce the maximum time from 11 to eight days. The

1 Paul O. Roberts, et al, "Analysis of the Incremental Cost and Trade-Offs Between Energy Efficiency and Physical Distribution Effectiveness in Inter-city Freight Markets," prepared by the Center for Transportation Studies at MIT for the Federal Energy Administration, Nov. 1976.

TABLE 42

ENERGY SAVINGS PER DAY AT GRADE CROSSING NUMBER 3
IN YEAR 2000, TWO-YARD DIRECTIONAL ALTERNATIVE

(1) Legal Speed Limit	(2) % of Time Blocked by Trains	(3) Average Daily Traffic	(4) Number of Autos Stopped	(5) Energy Used To Stop	(6) Number of Autos Idling	(7) Energy Used To Idle	(8) Number of Autos Slowing	(9) Energy Used To Slow	(10) Total Energy Used (or Saved)
45	17	10,800	1,836	27 ga.	1,836	49 ga.	8,964	63 ga.	139 ga.

Notes: Columns (1), (2), and (3) from Illinois DOT.

Column (4) = Column (3) x 0.17.

Column (5) = Column (4) x 0.01458. The multiplier 0.01458 gallons/auto to stop from 45 mph and accelerate back to 45 mph is from Figure A.2, U.S. DOT, Procedure for Estimating Highway User Costs, Fuel Consumption, and Air Pollution, 1980.

Column (6) = Column (4)

Column (7) = Column (6) x 0.02671. The multiplier 0.02671 gallons/auto is the product of 0.04167 hour (or a 2½ minute wait) and 0.64 gallons/hour spent while idling. The gasoline consumption comes from U.S. DOT Energy Requirements for Transportation Systems, 1980, Table 7.2.

Column (8) = Column (3) - Column (4)

Column (9) = Column (8) x 0.00708, U.S. DOT Procedure, Figure A.2. Assumes traveling 45 mph, slow to 25 mph at grade crossings. For slower speeds, autos were assumed to slow to 20 mph.

Column (10) = Column (5) + Column (7) + Column (9)

TABLE 43

THIRTY-YEAR FUEL SAVINGS RESULTING FROM
GRADE SEPARATION STRUCTURES

Plan	Fuel Saved (barrels)
Two-Yard Directional Plan	507,034
Three-Yard Directional Plan	507,034
Three-Yard Bidirectional Plan	534,178

percentage of trains processed in two days would increase from 67 to 83. Simulation results indicate the modal traffic shift increased rail traffic by 1.3 percent and decreased fuel use by one percent. These shifts represent only immediate adjustments made by existing customers in the way they transport current shipments. Roberts' model does not encompass the more subtle long-range impacts of changes in transportation on location decisions. These adjustments should result in additional intermodal shifts and more fuel savings. While Roberts cautions that his estimates apply specifically to conditions and traffic on the Philadelphia-Cleveland route, his results are probably indicative of the order-of-magnitude of this impact. This impact has not been calculated for the MARGE project.

Energy Consumption:

Energy required for construction is summarized in Table 44. Energy consumption per dollar was obtained from U.S. DOT Energy Requirements For Transportation Systems Table 25.3. This table provides average BTUs required per dollar spent on railroad construction in 1967.

The Commerce Department's Composite Construction Price Index was used to state the project's estimated construction cost in 1967 dollars. Application of the energy factor to this construction cost yields estimated energy required for construction.

Energy is also required for track maintenance, as rails, ties, and ballast are replaced routinely. Estimates of the net changes in track length proposed under the three alternatives are provided in Table 45. Average replacement factors were applied to the track length figures to obtain estimates of materials required for maintenance (see Table 46). Table 10 in U.S. DOT Energy Requirements for Transportation Systems was then used to estimate the energy required to produce these materials (see Table 47).

TABLE 44

ENERGY REQUIRED FOR CONSTRUCTION

	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Cost of Construction (millions of 1979 dollars)	$585	$647	$625
Cost of Construction (millions of 1967 dollars)	$189	$209	$202
Barrels of Oil Required for Construction	318×10^4	351×10^4	339×10^4

Summary:

To gain an idea of the overall energy impact of the restructuring alternatives, a comparison must be made between expected savings and expenditures of energy for each. Adding the 50-year savings from yard engine operations, the 50-year savings in the TOFC yard and the 30-year savings at the grade crossings, the Two-Yard plan produces savings of $47 million barrels of oil, the Three-Yard Directional plan 50.9 million barrels, and the Three-Yard Directional 56.8 million barrels. Subtracting energy used for construction and for 50 years of maintenance for the restructured facilities at 3.9 million barrels, 4.5 million barrels and 4.3 million barrels, for the three plans, respectively, it appears that the improvements would result in a net energy savings of 43 million barrels for the Two-Yard, 46 million barrels for the Three-Yard Directional and 52 million barrels for the Three-Yard Bidirection plan.

TABLE 45

CHANGE IN TRACK LENGTH

YARD TRACKS IN TRACK FEET	EXISTING	NET CHANGE	TOTAL
TWO-YARD DIRECTIONAL ALTERNATIVE			
Madison Yard	252,350	+254,450	506,800
Gateway Yard	332,000	+752,000	1,084,000
TOFC Yard	0	+130,420	130,420
TOTAL	584,350	1,136,870	1,721,220
THREE-YARD DIRECTIONAL ALTERNATIVE			
Madison/New Yard	0	+690,980	690,980
Gateway Yard	332,000	+752,000	1,084,000
TOFC Yard	0	+130,420	130,420
TOTAL	332,000	1,573,400	1,905,400
THREE-YARD BIDIRECTIONAL ALTERNATIVE			
Madison/New Yard	0	+645,000	645,000
Gateway Yard	332,000	+720,900	1,052,900
TOFC Yard	0	+130,420	130,420
TOTAL	332,000	1,496,320	1,828,320

Source: SEK, 1980

TABLE 46

TRACK MAINTENANCE REQUIREMENTS

(tons per year)

	YARDS		CORRIDORS	
	NET CHANGE IN TRACK FEET	CHANGE IN ANNUAL REPLACEMENT REQUIREMENTS	NET CHANGE IN TRACK FEET	CHANGE IN ANNUAL REPLACEMENT REQUIREMENTS
TWO-YARD ALTERNATIVE	1,136,870		147,682	
Steel Rail[1]		1,091		325
Wood Ties[2]		1,112		271
Limestone[3]		21,962		5,538
THREE-YARD DIRECTIONAL ALTERNATIVE	1,573,400		145,622	
Steel Rail[1]		1,510		320
Wood Ties[2]		1,538		268
Limestone Ballast[3]		30,395		5,460
THREE-YARD BIDIRECTIONAL ALTERNATIVE	1,496,320		134,534	
Steel Rail[1]		1,436		296
Wood Ties[2]		1,463		247
Limestone Ballast[3]		28,906		5,045

1 Yards require 1.92 pounds per track-foot annually
Mainline requires 4.4 pounds per track-foot annually

2 Yards require 1.9559 pounds per track-foot annually
Mainline requires 3.6764 pounds per track-foot annually

3 Yards require 38.6363 pounds per track-foot annually
Mainline requires 75 pounds per track-foot annually

Source: SEK, 1980

TABLE 47

ENERGY REQUIRED FOR 50 YEARS OF TRACK MAINTENANCE

	MATERIAL REQUIRED (ton per year)	ENERGY REQUIRED FOR 30 YEARS (thousands of barrels per 50 yrs.)
Two-Yard Directional Alternative		
Steel	1,416	567,000
Wood	1,383	203,000
Ballast	27,500	17,000
		787,000
Three-Yard Directional Alternative		
Steel	1,830	733,000
Wood	1,806	267,000
Ballast	35,855	20,000
		1020,000
Three-Yard Bidirectional Alternative		
Steel	1,732	693,000
Wood	1,710	253,000
Ballast	33,951	20,000
		969,000

Source: SEK and Table 1.0 in U.S. DOT Energy Requirements for Transportation Systems, June 1980.

TABLE 48

PRIMARY CONSTRUCTION MATERIALS

	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Steel Rail (tons)	50,082	66,723	63,280
Wood Ties (tons)	61,266	81,764	77,555
Limestone Ballast (tons)	145,972	195,343	185,324
Concrete (cubic yards)	55,000	55,000	55,000
Asphalt (cubic yards)	8,240,000	8,240,000	8,240,000
Fencing (lineal feet)	131,500	131,500	131,000
Pipe (lineal feet)	268,000	308,000	308,000

Note: The last four materials would be used for the Route 3 relocation and the construction of the TOFC yard, both of which would be the same for each alternative.

Source: SEK, 1980.

USE OF NATURAL RESOURCES

The project would require commitments of some natural resources. The total construction cost of $625 - $695 million gives an indication of the magnitude of this impact. Quantities of primary construction materials - steel, wood and limestone track ballast - required for each alternative are listed in Table 48. No problems are anticipated in obtaining these materials.

A substantial amount of fill material will be required for the project. Although the sources of fill material will not be finalized until actual construction plans are cleared, special provisions for the rehabilitation of all barrow sites will be written into all contracts, to assure their aesthetic and ecological acceptability as well as their safety.

The bluffs adjacent to the proposed project area could provide a ready source of fill. This might, however, lead to further scarring and erosion of the bluffs, limiting their value as a wildlife habitat and degrading the aesthetic quality of a dominant feature of the local landscape. Although the bluffs are no longer in a completely natural state, concern for their conservation is legitimate and must be considered when weighing alternative borrow sites. It is most likely that other sources of fill will be sought, perhaps in the uplands beyond the bluffs.

CONSTRUCTION IMPACTS

Depending on the alternative selected, construction will cost $625-$695 million, as shown in Table 49. The components of this cost estimate are discussed in Chapter II, of the MARGE EIS. Approximately eight years will be required for construction, with the largest expenditures occuring in years two through four. Funds have been budgeted for measures to minimize disruption (Two-Yard Directional Plan: $9.6 million, Three-Yard Directional Plan: $11.7 million, and Three-Yard Bidirectional Plan: $10.5 million). Railroad, pedestrian and vehicular traffic will be maintained at all times. Interruption of the local street system will be kept to a minimum by appropriate scheduling of project construction, specifically of grade separations and bridges. When temporary closings of local streets are required, these closings will be of the shortest possible duration.

The proposed project will involve the use of fill material (an estimated 5.5 million cubic yards. The impacts of locating appropriate sources of material have been considered in a previous section, but the disposal of excess and unsuitable materials and debris resulting from construction must also be considered. Disposal of all materials from both demolition and construction will be done in such a manner that public or private property will not be damaged or endangered and in accordance with any existing requirements to minimize potential adverse effects. As mandated by Section 107.01 of the State of Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, contractors will at all times observe and comply with all Federal and State laws, local laws, ordinances and regulations which in any manner affect the conduct of their work. Funding for such disposal is included in the 1.5 to 2% of the total project cost designated for mitigation measures.

Construction of the project will require an estimated 8,500 - 9,400 person-years of labor. The derivation of these figures is detailed in Table 49. Two types of costs are considered: construction costs and design/management costs. Hourly 1979 labor costs are estimated at $14.75

TABLE 49

LOCAL CONSTRUCTION IMPACTS

	TWO-YARD DIRECTIONAL ALTERNATIVE			THREE-YARD DIRECTIONAL ALTERNATIVE			THREE-YARD BIDIRECTIONAL ALTERNATIVE		
	Construction	Design/ Management	Total	Construction	Design/ Management	Total	Construction	Design/ Management	Total
Direct Effects									
a. cost[1] (millions of 1979 dollars)	$ 587	$ 41	$ 628	$ 656	$ 46	$ 702	$ 647	$ 45	$ 692
b. labor expenditures[2] 40% for Construction 100% for Design/Management (millions of 1979 dollars)	235	41	276	262	46	308	259	45	303
c. Person-years[3]	7,932	539	8,471	8,881	605	9,486	8,780	577	9,357
Induced Effects									
a. Person-years of Employment[4]	-	-	25,582	-	-	28,648	-	-	28,258
b. Local Business Generated[5] (millions of 1979 dollars)	-	-	$ 301	-	-	$ 336	-	-	$ 330
c. Local Personal Income Generated[6] (millions of 1979 dollars)	-	-	$ 403	-	-	$ 456	-	-	$ 442
d. Local taxes generated[7] (millions of 1979 dollars)	-	-	$ 19	-	-	$ 22	-	-	$ 21

1. From SEK.
2. Labor costs as percentages of total costs were estimated by SEK for Construction and Design/Management. The 40 percent used for construction was calculated by SEK, taking into account both the labor intensity of highway construction and the reduced labor required for railroad construction.
3. Labor expenditures divided by the annual cost per person yields person-years. For construction the annual cost per person equals the average hourly cost of $14.75 (including fringe benefits and contractor profit) multiplied by the standard work-year of 2000 hours. For Design/Management the average hourly cost is $38.
4. Construction employment multiplier is 3.02 (see text).
5. Business multiplier is 1.09 (see text). This has been applied only to direct employment in order to produce a conservative estimate.
6. Personal income multiplier is 1.46 (see text). Applied as above.
7. Local tax multiplier is .07 (see text). Applied as above.

for construction (Bureau of Labor Statistics) and $38.00 for design/ management (SEK). Both figures include fringe benefits, contractor profit and salary-related expenses. The total number of construction laborers is broken out below by skill level and by restructuring alternative:

	Two-Yard Directional Alternative	Three-Yard Directional Alternative	Three-Yard Bidirectional Alternative
Skilled Labor	198	219	212
Semi-skilled	298	329	318
Unskilled	496	549	529
TOTAL	992	1,097	1,059

According to the Missouri State Office of Employment Security, an average of 40,600 persons were employed in construction during 1980 in the St. Louis SMSA. Additionally, an average of 3,600 construction persons per month claimed unemployment compensation in 1980. The number of claimants ranged from 6,400 in March to 1,700 in October. Obviously, more than enough construction labor is available in the St. Louis area to meet any needs under the construction phase of the project. Also, construction labor is very mobile and labor from areas outside of St. Louis could be tapped, if necessary.

The creation of construction jobs will generate additional local business, personal income and taxes in the St. Louis area. Estimates of the magnitude of these induced impacts were calculated from information provided in the 1972 St. Louis Input-Output Model.[1] This model was constructed by Dr. Floyd Harmston of the University of Missouri at Columbia. Approximately $300 - 330 million (1979) of additional local business will be generated by the MARGE project. Restated in terms of employment, approximately 25,000-28,000 induced person-years of employment may result from the project. These figures represent totals

[1] An Input-Output Model of the St. Louis Region, 1972, St. Louis Regional Commerce and Growth Association

for the entire eight-year construction period. The purchase of materials locally will increase these impacts even further.

Detailed construction staging would be necessary to reduce negative construction impacts. For instance, grade separation must be provided at locations where streets and highways would be severed by yard construction before such construction progresses to the point of traffic disruption. Resident and business relocations must be accomplished prior to impact. In some instances housing of last resort may be required which would require considerable lead time. The construction schedule would provide for a two year period to perform mitigation measures prior to yard construction.

The Two-Yard Alternative would expand Gateway and Madison Yards. Expansion of Gateway Yard could be accomplished by constructing the receiving and departure tracks without interfering with day to day yard operations. The addition of this capacity would improve yard operations to the extent that further modifications to be made to the existing yard could be performed with minimal negative impact. The expansion of Madison Yard would involve extending the length of classification tracks and increasing the length and number of receiving and departure tracks. Even with the utmost detailed planning and coordination, interference with yard operations would occur and service deteriorate. This expansion would be scheduled over a six year period.

The Three-Yard Alternative would provide for the expansion of Gateway Yard, the construction of New Yard and modification of Madison Yard to handle local industrial traffic. The expansion of Gateway Yard could be accomplished as outlined in the Two-Yard Alternative with minimal negative impact to yard operations. The New Yard could be constructed with minimal negative impact on rail operations. Following the construction of New Yard, Madison Yard could be modified with no adverse impact on local industrial traffic.

The Three-Yard Alternatives could be implemented with much less interference with rail operations and less deterioration of rail service than the Two-Yard Alternative.

EMPLOYMENT IMPACT

The proposed project is expected to affect area employment in several ways. First as noted in the Construction Impact section, 8,500 - 9,400 man-years of labor will be required for construction. The addition of the resulting income to the local economy can be expected to generate some 3,700 - 4,100 induced jobs as explained in CONSTRUCTION IMPACTS.

Second, the project will improve the efficiency of the yard operations, thereby reducing railroad labor requirements. The estimated reduction is based, in part, on the estimate of future employment for the No-Build case. Railroad employment has been decreasing in recent years. While some continuing decline is likely, the precise magnitude of this change is unknown. The current level of employment, 4,271, therefore represents only an estimate of No-Build employment in the year 2000. Employment levels required in the alternative plans are listed in Table 50. The difference between these numbers and 4,271 represents a maximum estimate of job losses resulting from the project alternatives. The largest loss, 539 railroad jobs, occurs with the Three-Yard Bidirectional Plan. Jobs lost in the Two-Yard and Three-Yard Directional cases are 77 and 181, respectively.

The impact of this employment reduction on the existing gateway community is eliminated during the first six years by the labor protective agreements. All workers continue to be paid for this period. During this time, some workers are expected to withdraw from service due to death, retirement, or other reasons. Assuming past attrition rates continue, the Three-Yard Bidirectional Plan will produce only 27 surplus employees at the end of the six-year protective period. Fewer surplus employees result from either the Two-Yard or Three-Yard Directional Plans (Table 50).

Increased efficiency of TOFC yard operations also reduces the need for some non-railroad workers. Approximately 355 such jobs may be eliminated, although some offsetting jobs may be created at the new TOFC facility.

TABLE 50

ESTIMATED IMPACT ON

YEAR 2000 EMPLOYMENT*

	NO-BUILD ALTERNATIVE	TWO-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD DIRECTIONAL ALTERNATIVE	THREE-YARD BIDIRECTIONAL ALTERNATIVE
Number of jobs (year 2000)	4,271**	4,194	4,090	3,732
Change in number of railroad jobs from no-build case	-	0-77	0-181	0-539
Surplus employees at end of 6-year protective period	-	5	2	27
Change in number of TOFC related non-railroad jobs	-	0-355	0-355	0-355
Impacts of job losses on local business (thousands of 1980 dollars)	-	$10,647	$13,210	$22,034
Impacts of job losses on local personal income (thousands of 1980 dollars)	-	$14,261	$17,694	$29,513
Impacts of job losses on local taxes (thousands of 1980 dollars)	-	$ 684	$ 848	$ 1,415

* This table considers only rail jobs and rail-induced jobs. Construction jobs are described in the Construction Impact section.

** This represents a maximum estimate of year 2000 employment.

Source: SEK, 1980

The St. Louis Input-Output Model indicates that each dollar paid to households recirculates briefly in the St. Louis area economy. Each $1 paid in wages generates $1.09 of additional local business, $1.46 of personal income, and $.07 in local taxes. At average annual earnings of $22,611, the projected job losses could lead to the reductions in business, personal income, and taxes shown in Table 50.

Despite the loss of rail jobs, increased rail efficiency may have an overall positive impact on local employment. Transportation plays an important role in the local economy both as an industry itself and as part of the infrastructure serving other local industries. Improved transit times produce tangible benefits for rail customers, as described in the TRANSPORTATION section. The project is therefore expected to bolster the area economy by strengthening the local infrastructure. While this effect is not quantified, a healthy local transportation industry may be important in attracting firms to St. Louis. The St. Louis Regional Commerce and Growth Association lists Transportation as a key local advantage, stating, "St. Louis, the hub of the nation's transportation system, offers excellent access to U.S. and regional markets by all modes".

Finally the project will free currently underutilized riverfront land for possible redevelopment. The redevelopment study proposes one set of compatible land uses for the area. If this plan is realized, new jobs could be created. While the project does not guarantee implemention of the plan, it does create the potential for redevelopment and a more positive image to help attract new business to the area.

Appendix

APPENDICES

APPENDIX A

COMMUNITY INVOLVEMENT

For the broad, major objectives of the project to be realized, the Phase II work effort has had to identify and resolve a wide range of institutional, social, economic, and environmental concerns in a manner which allows interested private, governmental, and citizens groups and individuals to voice and resolve their concerns. Developing an action acceptable to all has necessitated the active participation of all interests in the project's Community Involvement Program (CIP).

The overall goal of the CIP is to develop and implement participation techniques which maximize local public/private input.

Four major groups whose participation in the Phase II effort is essential to meet the project's goals and objectives, were identified early in the project:

- The public sector, composed of local, state, and federal entities whose approval and support will be required for the project.
- The private sector, primarily the railroads which operate the system.
- The business sector, composed of those businesses and constituents who will be directly impacted through their use of transportation services.
- The citizens in the Project area.

In order to structure the participation input of the various groups, an organizational framework was established, based on five primary committees:

1. Railroad Steering Committee (RSC): Comprised of the chief executive officers of the various railroads operating in the St. Louis Railroad Gateway Terminal. This Committee provides policy direction for the rail restructuring component and, in cooperation with the Public Agency Steering Committee, offers overall policy direction for the total effort.

2. Railroad Technical Advisory Committee (RTAC): Comprised of operating or technical officers of the various railroads operating in the Gateway Terminal, as appointed by the RSC. The RTAC reports directly to the RSC and recommends specific RSC actions. The RTAC is the primary focus for railroad input and decisions on engineering, operations, and the overall environmental impact statement. Monthly meetings have been held throughout the planning process.

3. Public Agency Steering Committee (PASC): Comprised of (1) key elected and appointed officials from Illinois, Missouri, and the federal government; (2) representatives of private sector interests; and (3) the regional planning agencies. The PASC, with the RSC, provides the policy guidance for the Project. Quarterly meetings are held in addition to periodic informational mailings.

4. Public Agency Technical Advisory Committee (PTAC): Comprised of (1) the technical representative of each member of the PASC; (2) the technical representatives from other localities potentially impacted by the Project (as appointed by area officials); and (3) the chairperson of the Citizen's Advisory Committee (discussed below). The PTAC reports to the PASC concerning specific actions the PASC needs to take in fulfilling it policy responsibilities. Quarterly meetings have been held. The PTAC play a significant role in defining the range of rules, regulations, mitigation options and technical assistance available in developing the Environmental Impact Statement.

5. Citizen's Advisory Committee (CAC): Comprised of citizen representatives of each of the communities affected by the project in the Metro-East area. The citizens are selected based on their understanding of the issues or problems experienced by their communities and the entire area. The composition of the Committee was determined by suggestions from local political leaders, neighborhood and religious organizations, civic and environmental groups, and senior citizens. One of the primary roles of the CAC has been to identify the impacts of the project on the areas involved. In addition to meeting quarterly, members of the CAC also serve along with the project staff, as informational resources for area civic, religious, social, and union organizations in the area, explaining the project and soliciting comments.

Community Information Dissemination

Several techniques were used to disseminate information about the project and to generate interaction among the various groups and area citizens.

- Newsletters were published in April and September of 1980 and in March of 1981. A fourth newsletter will be issued in May of this year and will contain articles on the Environmental Impact Statement and on railroad restructuring preferences. These newsletters served to keep interested parties informed on the project progress and activities and to announce upcoming meetings.

- Audio-visual presentations including slides and videotapes were produced for use at meetings to give an overview of the MARGE project. They provided information on the history of the St Louis Rail Gateway and on the project's goals. The videotapes were particularly useful in stimulating discussion on potential redevelopment ideas for the Metro East riverfront.

- Progress reports on the required environmental studies were issued to all committees on a regular basis to summarize project activity for the period and to record financial expenditures. Committees were convened at intervals to conduct workshops as events developed which were relevant to their particular area of interest.

- Informational meetings for the general public were scheduled in each community. Two series of meeting were held in April and in September of 1980 in Centreville, Sauget, East St. Louis, Venice, and Brooklyn, Illinois and in St. Louis, Missouri. A third round of meetings was conducted in March, 1981. The MARGE staff has also been meeting on a continuing basis, with Chambers of Commerce, major employers, state legislators, area planning commissions, local mayors and civic groups to give presentations on the progress of the project.

- Survey - In an effort to inform people about the program and to find out how they saw it affecting them, a house-to-house survey was conducted in May, 1980. Area college students canvassed residences in East St. Louis, Venice, Madison, Cahokia and surrounding communities. Results of the survey were tabulated to give the staff a better insight into how the project is perceived by the communities. 79% of area residents were of the opinion the consolidating the rail yards and improving grade crossings would improve their communities. 95% of those responding voiced the belief that the project would bring more jobs and a stronger economic base to the entire area.

- Finally, news media coverage was relied on heavily to provide the public with information about the MARGE project. The project has been featured in all area newspapers and on television and radio community affairs programs. As public information meetings were scheduled, all media carried reports of locations, times and results. Fliers, maps and meeting notices have been widely distributed in the neighborhoods through churches, civic groups and schools.

The effectiveness of the Community Involvement Program can be demonstrated by the issues consistently raised, and by the extent to which these issues have been addressed in this Environmental Impact Statement. The most commonly voiced concerns were:

- Relocating homes to acceptable areas
- Preserving the integrity of neighborhoods
- Consolidating rail traffic to the fewest corridors possible and eliminating delay by building grade separations
- Increasing local government tax revenues
- Retaining relocated businesses within each community
- Reducing exposure to railroad noise, air pollution, and to the risk of hazardous materials transport, and
- Assuring public involvement in planning for business and employment opportunity.

These concerns, and the aspirations of area residents and businesses for the community development potential of the MARGE project will continue to be structured into the alternatives analysis review process and eventual project implementation.

SCOPING PROCESS

"Scoping" is the process developed by the Council for Environmental Quality and implemented by the U.S. Department of Transportation through regulations specified at 49 U.S.C. 1501.7. A project is presented to all affected Federal, State and local agencies and all identifiable individuals and organizations for their assistance in developing the significant issues and applicable laws, permits and regulations pertaining to the project's implementation. The purpose of scoping is to confirm that a project Draft Environmental Impact Statement addresses all the relevant facets of design engineering and the impact of the project's construction phase and implementation on the social, economic and natural environment where the project occurs.

The MARGE Project Scoping Process began with letters of invitation to a meeting in East St. Louis on November 29, 1979. Invitations were sent to 17 federal agencies by the Federal Railroad Administration, with letters to 16 mayors, eight township officials, three county chairmen, nine state agenices, two universities, four area planning commissions, nine state legislators, four area utility companies, three port district administrators, seven business, trade and union councils, two environmental groups and five neighborhood development and community action organizations from the Project office. Table I lists all agencies and organizations invited to scoping meetings. In addition, notices of the scoping meeting were published in the Federal Register, the Southern Illinoisian as the State newspaper of public record for the current year, and in newspapers in both St. Louis and the Metro East area of Illinois. Thirty-three people attended the initial scoping meeting to express interest and direction, to inform the Project staff and consultants of review process expectations, and to establish liaison relationships. Four agencies did not attend, but sent letters overviewing their regulatory responsibilities and requesting that further correspondence and the Draft Environmental Impact Statement be forwarded to a designated staff reviewer.

Letters were sent to the entire scoping meeting invitation list following the meeting, thanking participants for their assistance and beginning an ongoing Project development and review relationship. Non-attending agencies were asked to respond as to their continued interest in the project, and those few agencies reporting their expected lack of involvement or review authority in the MARGE Project were dropped from future mailing lists. Some agencies and organizations asked to be kept on all informational mailing lists, some also asked to be notified of all public meetings and others requested that they only be contacted again when the draft DEIS was published.

During the next 15 months, the interested agencies were integrated into the consultant studies development and review process. Agency data requirements were confirmed and technical reports structured to address the issues raised by the reviewing authorities. Citizen groups and others were advised of the Project's development as the planning process continued, through appointment of a representative to one of the planning review committees or through periodic mailings.

A second round of scoping meetings was conducted in January, 1981, to present the interim list of technical studies and to discuss the depth of analysis being developed in different subject areas. Meetings were held in East St. Louis for local, state and regional scoping process participants, and in Washington, D.C., for federal officials including the Federal Railroad Administration. One hundred and twenty-three invitations were issued, and over 40 scoping participants attended the second set of meetings offering further technical assistance and direction.

The scoping process technically concludes with the distribution of the Draft Environmental Impact Statement, and the receipt of comments and directions which will be incorporated into the Final Environmental Impact Statement.

TABLE I
SCOPING PARTICIPANTS
THROUGH THE FEDERAL RAIL ADMINISTRATION
AND ILLINOIS DEPARTMENT OF TRANSPORTATION

FEDERAL:
U.S. Department of Commerce
- Economic Development Administration
U.S. Department of Agriculture
U.S. Department of Health and Human Services
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
- Heritage Conservation & Recreation Service
- Fish and Wildlife Service
U.S. Department of Energy
U.S. Department of Transportation
- Federal Highway Administration
- Federal Aviation Administration
- Urban Mass Transit Administration
- Coast Guard
U.S. Environmental Protection Agency
Interstate Commerce Commission
Council on Environmental Quality
Advisory Council on Historic Preservation
U.S. Army Corps of Engineers
Upper Mississippi River Basin Commission
- Community Services Administration

STATE:
Illinois Emergency Services and Disaster Agency
Missouri Highway and Transportation Department
Southern Illinois University
Illinois Department of Transportation
- Division of Highways
- Division of Water Resources
Illinois Department of Commerce and Community Affairs
Illinois Department of Conservation
Illinois Department of Corrections
Illinois Department of Agriculture
Illinois Department of Mines and Minerals
Illinois Department of Public Health
Illinois Capital Development Board
Illinois Commerce Commission
Illinois Environmental Protection Agency
Illinois Institute of Natural Resources
- State Water Survey
- Illinois Archaeological Survey
- State Geological Survey
- Natural History Survey
University of Illinois
Missouri Department of Natural Resources
Illinois State University

LOCAL:

City of Alorton, Illinois
City of Brooklyn, Illinois
City of Cahokia, Illinois
City of Centreville, Illinois
City of Dupo, Illinois
Village of East Carondelet, Illinois
City of East St. Louis, Illinois
City of Fairmont, Illinois
City of Granite City, Illinois
City of Madison, Illinois
City of National City, Illinois
Village of Sauget, Illinois
City of Venice, Illinois
Village of Washington Park, Illinois
City of Pontoon Beach, Illinois
Canteen Township, Illinois
Centreville Township, Illinois
East St. Louis Township, Illinois
St. Clair Township, Illinois
Stites Township, Illinois
Sugar Loaf Township, Illinois
Nameoki Township, Illinois
Granite City Township, Illinois
Venice Township, Illinois
Madison County, Illinois
St. Clair County, Illinois
City of St. Louis, Missouri
St. Louis County, Missouri
St. Louis Regional Commerce and Growth Association
Bi-State Development Agency
Building and Construction Trades Council
East St. Louis Chamber of Commerce
East St. Louis Neighborhood Development Corporation
East Side Sierra Club
East-West Gateway Coordinating Council
Illinois American Water Company
Illinois Bell Telephone Company
Illinois Power Company
LaClede Gas Company
Land of Lincoln Legal Assistance Foundation
Metro East Business Association
Metro East Sanitary District
National Association for the Advancement of Colored People
St. Louis Port District
St. Louis Traffic Club
Southern Illinois Building & Construction Trades Council

SCOPING PARTICIPANTS (continued)

Southwest Port District
Southwestern Illinois Metropolitan & Regional Planning Commission
State Community College
Target 2000 Task Force
Tri-City Regional Port District
Union Electric Company
Urban League of St. Clair County
Sierra Club
St. Louis Business Resource Center
Cahokia Mounds Historical Site

Various federal and state agencies had scoping participation contacts through both central and regional offices.

APPENDIX B

GUIDELINES FOLLOWED IN IDENTIFYING STRUCTURES TO BE TAKEN BY THE PROJECT

A. A 200-foot zone from the outside railroad track is used for identifying potential displacements.

B1. If a structure is in question, count it as a displacement.

B2. If a property is isolated, count it as a displacement.

B3. All homes in grade separation rights-of-way are included in the 200-foot count of displacements.

B4. Assume that streets which are cut-off by the project will be connected.

B5. Use 1980 average household size for each household to obtain an estimate of the potentially displaced population.

APPENDIX C

METHODOLOGY FOR ADJUSTING THE 1980 PRELIMINARY CENSUS ESTIMATES FOR NONRESPONSES

1. Divide the number of vacancies by the vacancy rate to obtain the number of housing units which responded to the survey.

   Example: Centreville City
   183 vacant units ÷ 6.5% vacancy rate yields 2,815 housing units

2. Obtain the difference between 1 and total number of housing units, which is the number of unclassified units.

   Example: 3,000 - 2,815 = 185

3. Estimate the proportion of unclassified units that are vacant based on the given vacancy rate.

   185 x 6.5% = 12

4. Assume the remainder are occupied and use the given household size to estimate total population. Assume also that the number of occupied units is the same as the number of households (reliable numbers are total units and household size.)

   Household size = 3.21
   Occupied units = 2,805
   Pop. = 3.21 x 2,805 = 9,004

APPENDIX D

ILLINOIS BI-STATE BUS ROUTES

LOCAL SERVICE			NOV. 1979	MAY 1980	JULY 1980
3501	Caseyville-Collinsville	AV. WKDY.	1,020	1,040	753
		SAT.	324	302	233
		SUN.	-	-	-
3502	Cahokia-Centreville	AV. WKDY.	515	512	502
		SAT.	354	159	171
		SUN.	-	-	-
3503	Collinsville-Edwardsville	AV. WKDY.	1,183	1,116	974
		SAT.	340	335	297
		SUN.	-	-	-
3504	O'Fallon	AV. WKDY.	213	218	187
		SAT.	198	168	151
		SUN.	-	-	-
3505	Waterloo-St. Louis	AV. WKDY.	299	398	367
		SAT.	-	-	-
		SUN.	-	-	-
3507	Collinsville-Belleville (INAUG. 10/14/74)	AV. WKDY.	241	263	274
		SAT.	312	265	155
		SUN.	-	-	-
3510	State-Milton	AV. WKDY.	535	547	368
		SAT.	91	108	94
		SUN.	-	-	-
3511	Salu-16th	AV. WKDY.	312	268	214
		SAT.	57	135	61
		SUN.	-	-	-
3512	College-Central	AV. WKDY.	260	236	141
		SAT.	43	48	32
		SUN.	-	-	-
3513	Alton-St. Louis	AV. WKDY.	799	872	820
		SAT.	409	314	263
		SUN.	-	-	-
3516	Wood River-Godfrey (INAUG. 9/2/75; DISC. 11/28/77)	AV. WKDY.	-	-	-
		SAT.	-	-	-
		SUN.	-	-	-

APPENDIX D (continued)

ILLINOIS BI-STATE BUS ROUTES

LOCAL SERVICE			NOV. 1979	MAY 1980	JULY 1980
3530	McKinley Bridge	AV. WKDY.	1,799	1,778	1,714
		SAT.	761	766	679
		SUN.	307	193	135
3532	East Granite	AV. WKDY.	423	379	219
		SAT.	219	254	132
		SUN.	-	-	-
3533	Wst Granite-Stockyards	AV. WKDY.	411	564	404
		SAT.	136	171	153
		SUN.	-	-	-
3560	Belleville-St. Louis	AV. WKDY.	9,993	10,409	6,775
		SAT.	5,302	5,267	3,925
		SUN.	2,022	2,055	1,585
3561	East McKinley-Raab	AV. WKDY.	572	504	277
		SAT.	243	138	101
		SUN.	51	79	34
3562	Lebanon Avenue	AV. WKDY.	342	303	253
		SAT.	199	199	151
		SUN.	48	65	99
3564	Scott Air Force Base	AV. WKDY.	134	172	147
		SAT.	-	-	-
		SUN.	-	-	-
3565	Swansea-North Belt	AV. WKDY.	134	122	81
		SAT.	38	42	20
		SUN.	-	-	-
3702	Rosemont	AV. WKDY.	2,844	3,113	2,007
		SAT.	1,516	-	-
		SUN.	472	-	-
3703	Washington Park	AV. WKDY.	2,905	2,791	1,987
		SAT.	1,773	3,345	2,432
		SUN.	608	1,151	889
3704	Missouri-Stockyards	AV. WKDY.	597	579	393
		SAT.	270	262	209
		SUN.	-	-	-

APPENDIX D (continued)

ILLINOIS BI-STATE BUS ROUTES

			NOV. 1979	MAY 1980	JULY 1980
LOCAL SERVICE					
3706	Alta Sita-20th & Central	AV. WKDY.	4,628	4,627	3,282
		SAT.	2,745	2,709	2,395
		SUN.	666	782	520
3709	East St. Louis Crosstown (INAUG. 10/27/75)	AV. WKDY.	452	488	214
		SAT.	238	192	195
		SUN.	80	107	43
SUBTOTAL		AV. WKDY.	30,611	31,290	22,353
		SAT.	15,468	15,179	11,849
		SUN.	4,254	4,432	3,305
EXPRESS SERVICE (Weekday Service Only)					
4504	O'Fallon X	AV. WKDY.	489	494	495
4513	Alton-Hazelwood Park Ride (INAUG. 11/3/75)	AV. WKDY.	148	111	86
4530	Pontoon X	AV. WKDY.	715	618	527
4531	Granite City-Hazelwood X (INAUG. 6/15/77)	AV. WKDY.	89	80	68
4558	Tubman X (INAUG. 10/14/74)	AV. WKDY.	162	136	178
4559	West Main X	AV. WKDY.	309	319	281
4560	Belleville X	AV. WKDY.	909	835	848
	SUBTOTAL	AV. WKDY.	2,821	2,593	2,483
9000	School	AV. WKDY.	2,230	2,300	***
		SAT.	-	-	-
		SUN.	-	-	-
9501	Race Track	AV. WKDY.	427	412	355
		SAT.	435	433	462
		SUN.	-	481	306
6000	Opera	AV. WKDY.	-	-	49
		SAT.	-	-	-
		SUN.	-	-	-

APPENDIX D (continued)

ILLINOIS BI-STATE BUS ROUTES

LOCAL SERVICE		NOV. 1979	MAY 1980	JULY 1980
TOTAL ILLINOIS	AV. WKDY.	36,089	36,395	25,240
	SAT.	15,903	15,612	12,311
	SUN.	4,254	4,913	3,611
SYSTEM TOTAL	AV. WKDY.	262,481	251,744	201,962
	SAT.	116,195	120,087	100,430
	SUN.	42,039	45,671	37,314

Source: Bi-State Development Corp., 1980
***Schools closed during count.

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